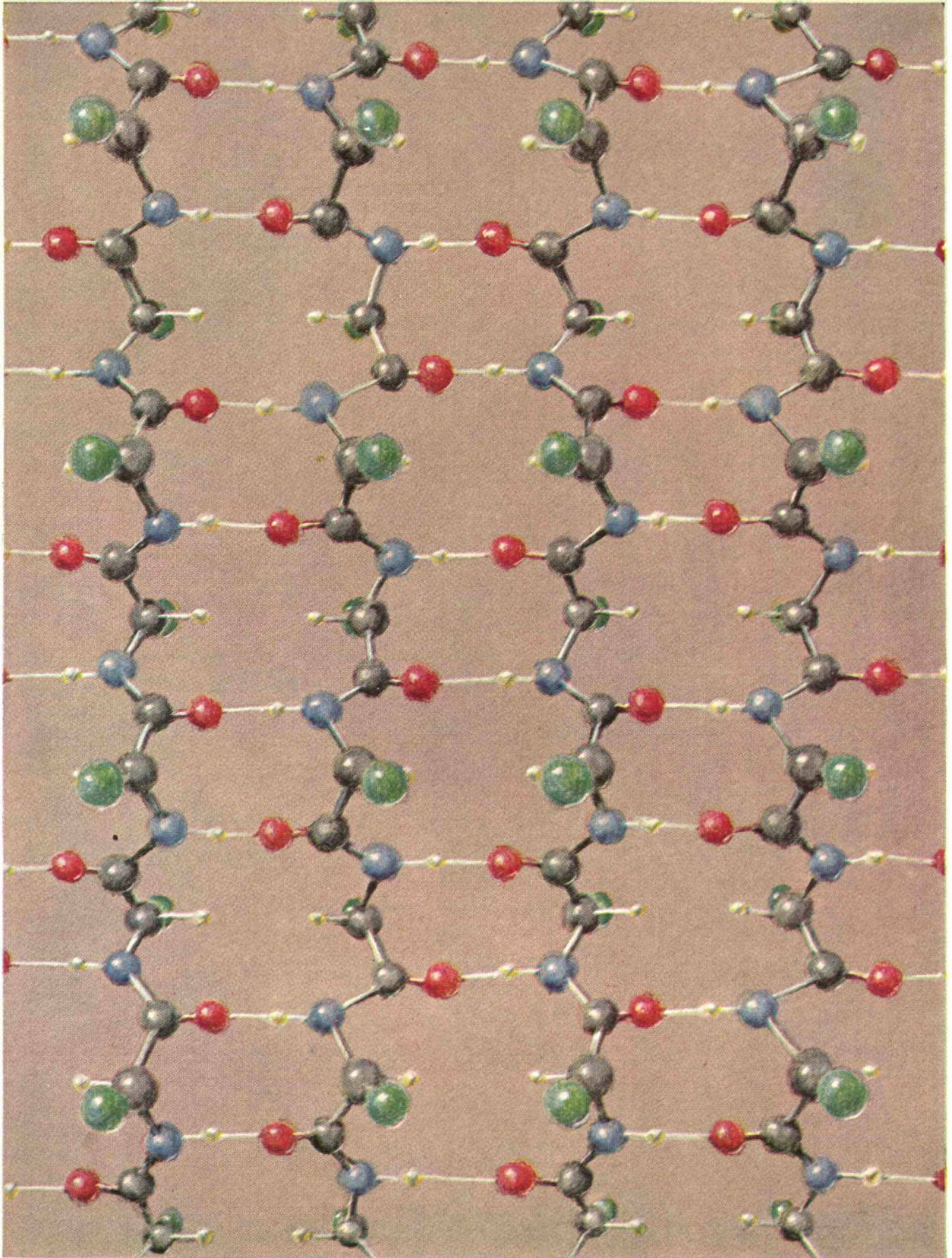


Technology Review

Edited at the Massachusetts Institute of Technology



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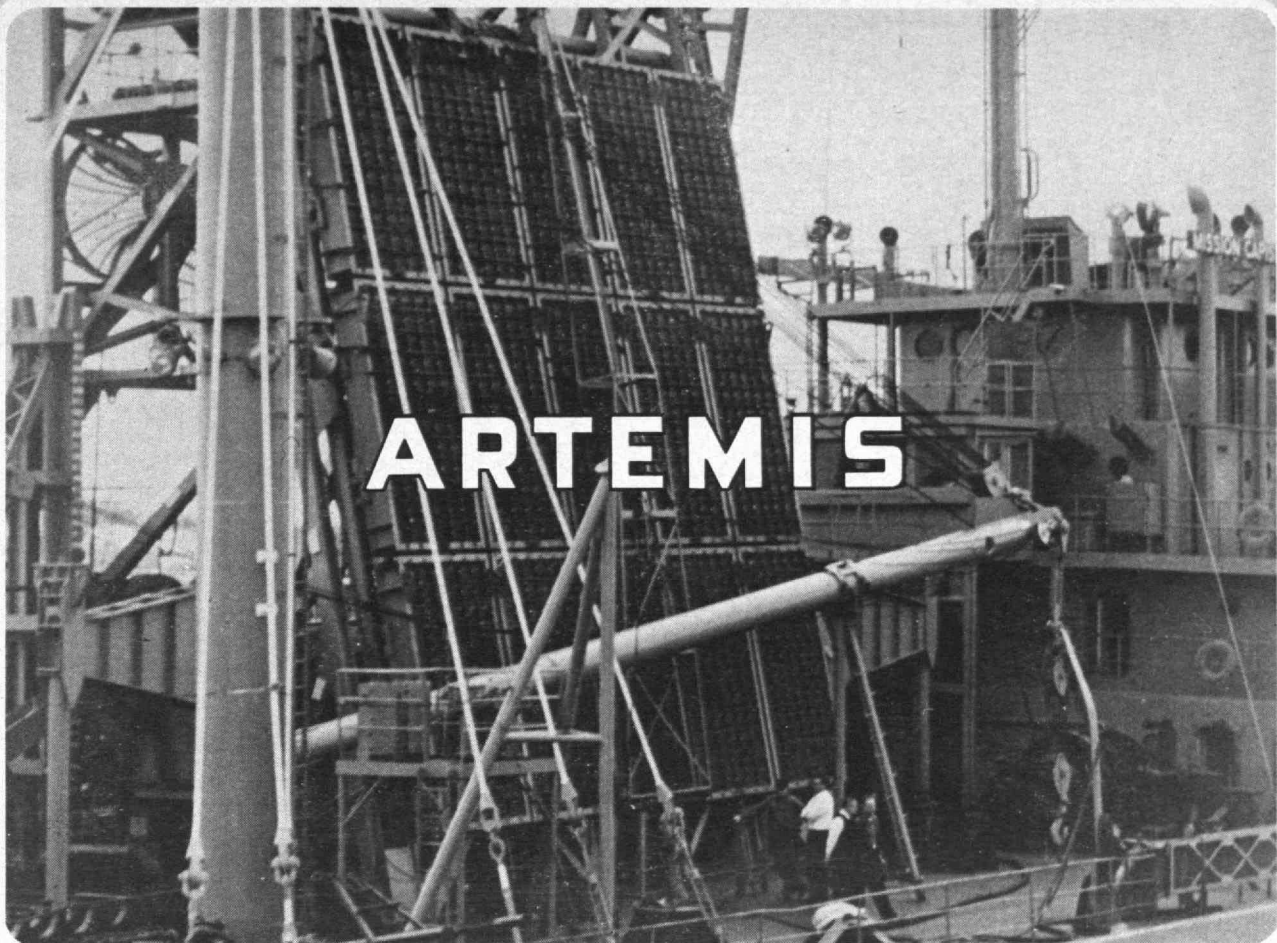
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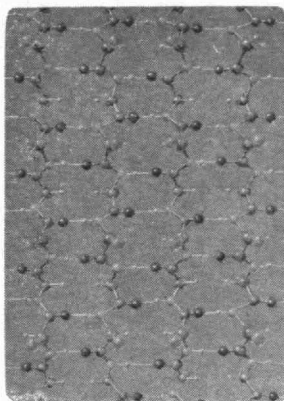
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A NEW PRESIDENT FOR M.I.T. 13

The Institute's Corporation elects Howard W. Johnson, Dean of the Alfred P. Sloan School of Management.

A Century of LIFE SCIENCES AT M.I.T. 17



Professor Irwin W. Sizer reviews their history on the occasion of the dedication of a new building and an international symposium on the biological sciences. In keeping, The Review's cover shows a small portion of a single layer of polypeptide chains in a silk fiber, as drawn by Roger Hayward, '22, in *The Architecture of Molecules*, by Pauling and Hayward (W. H. Freeman & Company, San Francisco). Following are reports and essays based on the dedication and symposium last December 2-3.

STRUCTURE OF LIFE 21

Science is gaining new insight into the order underlying complexity, writes Professor Salvador Luria.

TOWARD A NEW BESTIARY 22

In the octopus and other creatures, neurophysiologists are discovering some intriguing circuitry.

'IN THE YEAR 12 A. DNA' 24

Dedication of the Uncas A. and Helen F. Whitaker Building establishes a Center for the Life Sciences.

THE TWO SIDES OF CRISIS 25

Professor Samuel A. Goldblith, '40, discusses the danger inherent in the unequal wealth of nations.

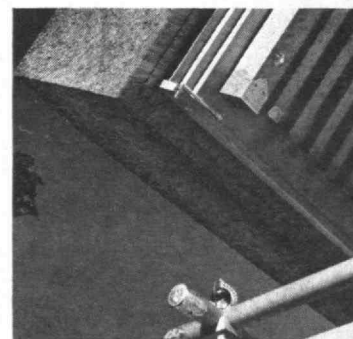
Individuals Noteworthy 7

The Trend of Affairs 16

They Retire This Year 27

Institute Yesteryears 40

The Ise shrines of Japan are not hard to reach physically but the spiritual journey is longer, writes Dean Emeritus John E. Burchard, '23. His introduction to a new M.I.T. Press volume is a feature of this month's book section, starting on page 31.



Detail: Ise Shrine

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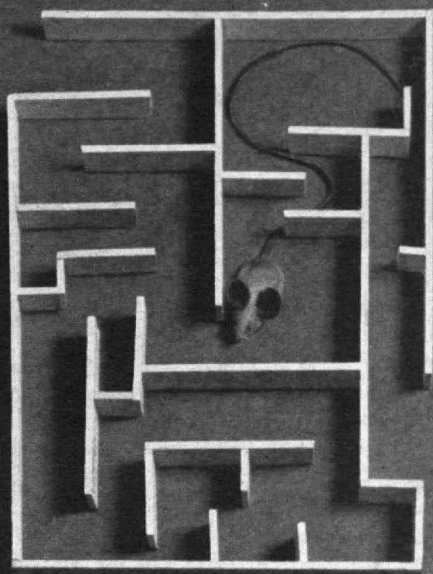
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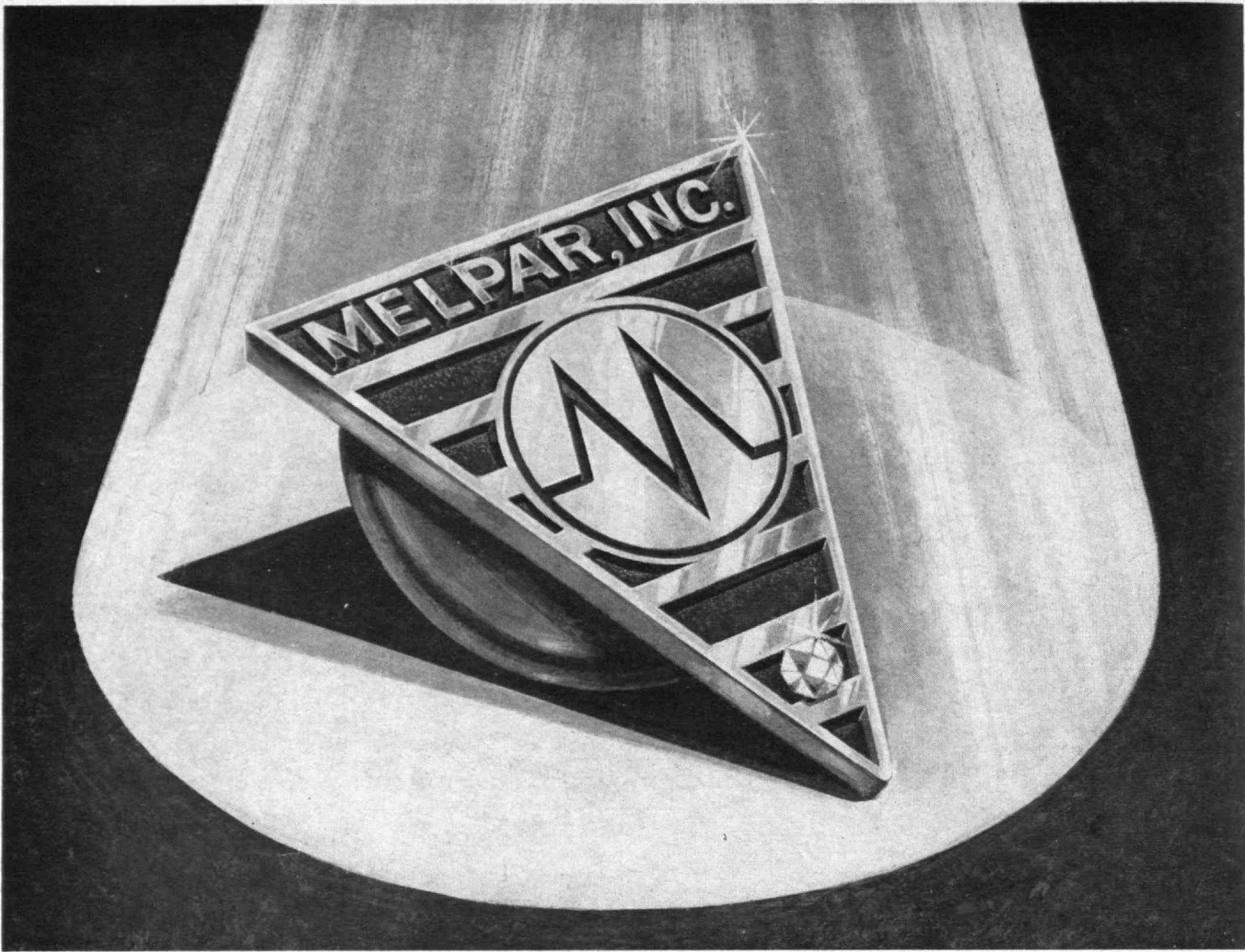
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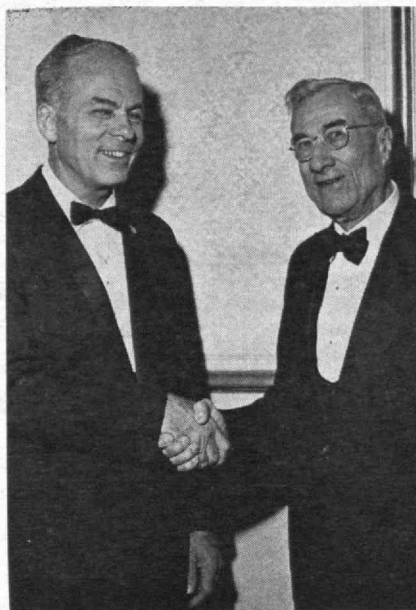
Home from CERN

Victor F. Weisskopf, Professor of Physics, returned to M.I.T. on January 1 to assume his new position as Institute Professor. Professor Weisskopf has been on leave since December, 1960, serving as Director-General of the European Organization for Nuclear Research (CERN) at Geneva, Switzerland, an important center for work and research on high-energy physics.

Colleagues throughout the world who visited and worked in the theoretical group at CERN while Dr. Weisskopf was Director-General have recently accorded him a special honor by publishing a volume of original contributions dedicated to him. Professor Herman Feshbach, '42, of M.I.T. was a co-editor of the volume with A. de Shalit of Weizmann Institute, Rehovoth, Israel, and L. Van Hove, of CERN. M.I.T. contributors included Professors Bernard T. Feld, Kerson Huang, '50, Francis E. Low, Philip Morrison, and (with Feshbach) A. K. Kerman, '53.

During his stay at CERN, there were added to Professor Weisskopf's numerous awards the honorary Ph.D. degree from the University of Vienna on the 600th anniversary of that institution and honorary Sc.D. degrees from Oxford University and from Yale University. His book, *Knowledge and Wonder; The Natural World as Man Knows It* (see The Technology Review, December, 1962), published while he was at CERN, was selected by the Thomas Alva Edison Foundation as the best science book of the year for youth.

A native of Vienna and trained in Europe, Professor Weisskopf worked with such distinguished leaders in physics as Schrodinger, Pauli, and Bohr before coming to the U.S. in 1937 to join the faculty of the University of Rochester. During World War II, he worked on the Manhattan Project, and became professor of physics at M.I.T. in 1946. Professor Weisskopf is a past president of the American Physical Society and received the Max Planck Medal of the German Physical Society in 1956.



Dr. W. B. Franklin, President of the American Institute of Chemical Engineers, greets award recipients, Dr. Lewis (at left) and Dr. Gilliland.



Professional Honors in Chemical Engineering

Two leaders in chemical engineering education and research at M.I.T. received major awards at the annual meeting in December of the American Institute of Chemical Engineers.

One of the engineering profession's highest honors, the John Fritz Medal, was presented to Warren Kendall Lewis, '05, Professor Emeritus and former Head of the M.I.T. Department of Chemical Engineering.

In turn, Edwin R. Gilliland, '33, present Head of the Institute's Chemical Engineering Department, received the Warren K. Lewis Award, named in honor of Dr. Lewis.

Known as the founder of chemical engineering, Dr. Lewis was awarded the John Fritz Medal "for establishing the modern concept of chemical engineering, developing generations of leaders in engineering and science, and pioneering industrial processes that have contributed immeasurably to the progress of mankind."

The Fritz medal was established in 1902 and is sponsored by the A.I.Ch.E., the American Society of Mechanical Engineers, the American Society of Mining, Metallurgical and Petroleum Engineers, the Institute of Electrical and Electronics Engineers,

and the American Society of Civil Engineers.

The developer of the fluid bed technique for catalytic cracking of oil, Dr. Lewis made his major contributions to industry in methods of gasoline distillation, vacuum distillation of lubricating oils, reservoir engineering, petroleum production, and rubber technology.

The Lewis award presented to Dr. Gilliland consists of a scroll and \$2,000 in cash. Sponsored jointly by the Humble Oil & Refining Company and the Esso Research and Engineering Company, it was established in 1963 to recognize distinguished chemical engineering educators.

Dr. Gilliland, who has received a number of other awards from professional societies, has been head of the Chemical Engineering Department since 1961. During his career as an educator, he has also made outstanding contributions to the government. At present he is a consultant to the Office of Science and Technology and a member of the Ad Hoc Advisory Committee for the Department of Interior's Office of Saline Water.

(Continued on page 8)

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INDIVIDUALS NOTEWORTHY

(Continued from page 7)

Carle R. Hayward: 1880-1965

Carle R. Hayward, '04, Professor Emeritus of Process Metallurgy, died on December 26 after a long illness. He was an effective and popular teacher for 45 years and had published extensively on his research dealing with the extraction of many of the metals.

Professor Hayward was born in Yankton, S.D., but his family moved to Quincy, Mass., when he was a boy. After being graduated from M.I.T. he taught science at Bellows Free Academy in Fairfax, Vt., for two years before returning to the Institute as an instructor in mining engineering and metallurgy in 1906. He was appointed assistant professor in 1912, associate professor in 1921, and professor in 1938. After his retirement in 1946 he continued to teach until 1951.

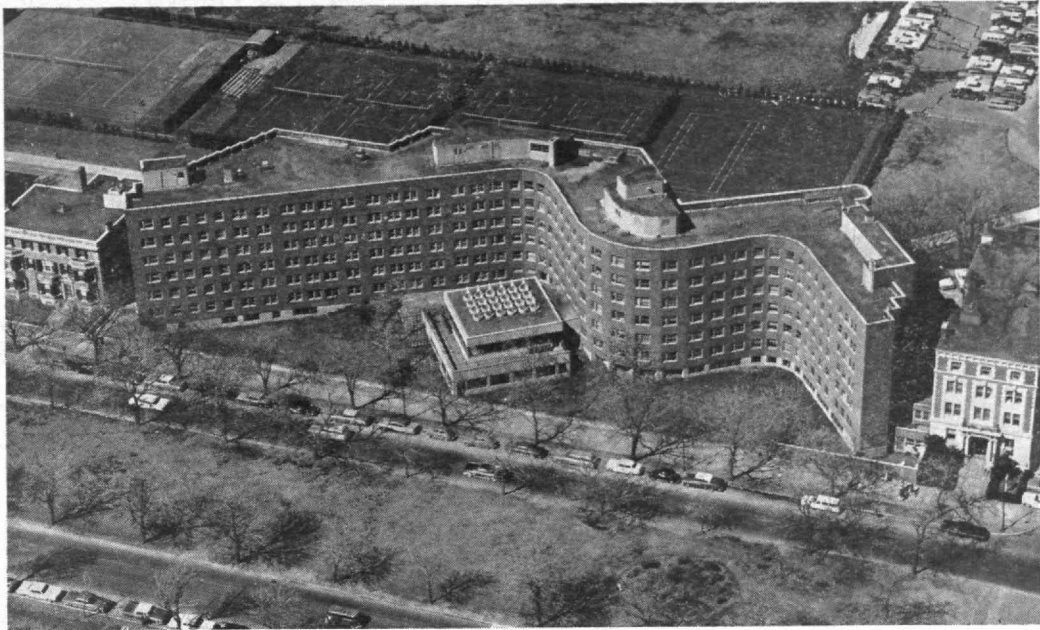
Professor Hayward held a number of patents and played a part in developing the commercial process of producing oxygen-free copper. He both wrote and translated a number of books on metallurgy, and his *Outline of Metallurgical Practice* was a standard textbook for many years. A member of the British Institute of Metals and of The American Institute of Mining, Metallurgical and Petroleum Engineers, Professor Hayward had served as chairman of the American Institute's Committee on Reduction and Refining of Lead and Zinc and as chairman of the Boston Section.

He was a member of the Executive Committee of the Alumni Council from 1935 to 1937, president of his class from 1954 to 1959, and was secretary after that time. Professor Hayward also served on the Quincy City Council and for 30 years was president of the Quincy Y.M.C.A. He was a member of the Quincy Lodge of Masons, the Bethany Congregational Church in Quincy, and the Mayflower Descendants Society.

Surviving are his wife, Mary Murray Hayward; a son, Murray H. Hayward of Birmingham, Mich.; two grandchildren; and a sister, Miss Corinne L. Hayward of Duarte, Calif.

(Continued on page 10)

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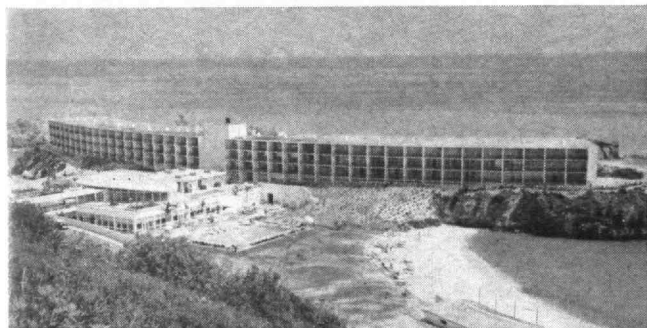
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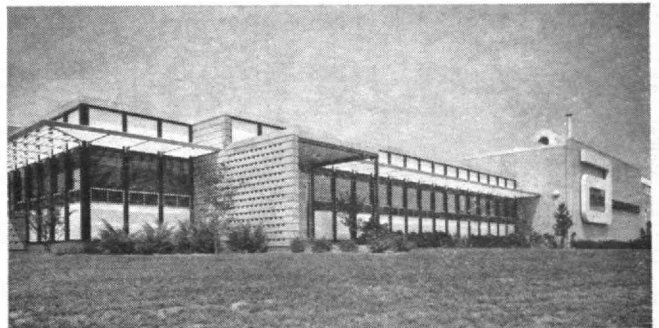
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(Continued from page 8)

New Posts

Named in the news of promotions, elections, and appointments recently were:

Harold W. Bialkowski, '28, as President, Stora Kopparberg Corporation . . . *George E. White*, '29, as Vice-president, Corporate Engineering Department, General Foods Corporation . . . *Schrade F. Radtke*, '40, as Executive Vice-president and Director of Research, International Lead Zinc Research Organization, Inc. . . . *Alvin H. Hartman*, '41, as a Director, Narragansett Capital Corporation . . . *Norman C. Michels*, '41, as Executive Vice-president and General Manager, Lee Wilson Engineering Company, Inc.;

Carl M. Mueller, '41, as a Director, Cabot Corporation . . . *Robert C. Seamans, Jr.*, '42, as Deputy Administrator, National Aeronautics and Space Administration . . . *Jacques R. Maroni*, '43, as Manager, Special Marketing Studies Depart-

ment, Forward Marketing Plans Office, Ford Motor Company . . . *Edward J. Fradkin*, '46, as Assistant Vice-president—Project Engineering, Scientific Design Company, Inc.; *Frederick J. Ross, Jr.*, '46, as Vice-president, The Carborundum Company . . . *Thomas J. Dunn*, '48, as New York District Manager, Diamond Power Specialty Corporation . . . *Maurice Rifkin*, '48, as Associate Head, National System Analysis Department, The MITRE Corporation;

Roger N. Saleeby, Jr., '50, as Director of Marketing Research, Philip Morris, Inc. . . . *David A. Bosson*, '51, as a Director, Industrial Nucleonics Corporation . . . *Gordon J. Van Wylen*, '51, as Dean, College of Engineering, University of Michigan;

Jess L. Belser, '52, as General Manager—Operations Engineering, Continental Can Company . . . *Henry A. Sandmeier*, '52, as Visiting Professor of Nuclear Engineering, Purdue University . . . *David R. Whitehouse*, '54, as Research Scientist, Research Division, Raytheon Company;

William S. Grinker, '56, as Boston

Branch Manager, Honeywell Electronic Data Processing . . . *Charles R. Adler*, '60, as Manager—Product Planning, Business Systems Markets Division, Eastman Kodak Company . . . *Stephen M. Pollock*, '60, as an Associate Professor, Operations Analysis Department, Naval Postgraduate School, Monterey, Calif. . . . *Peter C. Wayner, Jr.*, '60, and *Ru-Liang Wang*, '65, respectively, as Assistant Professor of Chemical Engineering, and as Assistant Professor of Civil Engineering, Rensselaer Polytechnic Institute.

(Continued on page 36)

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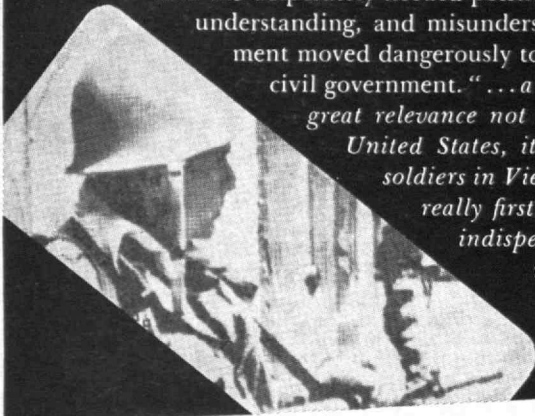
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by *George Armstrong Kelly*. The French army, ordered to fight and to win in Indochina and later in Algeria, was denied the means and the desperately needed political direction. Thwarted, misunderstanding, and misunderstood, the military establishment moved dangerously toward direct conflict with the civil government. "...a penetrating study...that has great relevance not only for France but for the United States, its professional army and its soldiers in Vietnam."—Joseph Kraft. "...a really first rate book...it will become indispensable to any student of recent French history."—Jay Luvaas. 404 pages, \$10.00



Women and the Scientific Professions: The M.I.T. Symposium on American Women in Science and Engineering

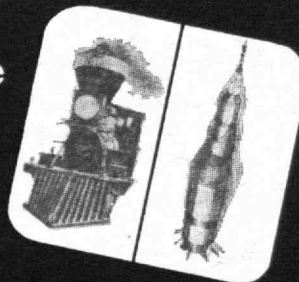
edited by *Jacquelyn A. Mattfeld and Carol E. Van Aken*.

In the decade 1950-1960 the number of women in engineering declined from 1.2% to .8%; in the sciences, from 11% to 9%. In the 1950's women received 10% of the doctoral degrees in this country compared to almost 15% in 1920. What are the personal, social, and economic factors involved in the decline? The urgency and timeliness of the subject matter, and the provocative way it is handled by such distinguished contributors as Bruno Bettelheim, Mary I. Bunting, Erik H. Erikson, James R. Killian, Jr., and Alice S. Rossi, will appeal to the general reader as well as to the social and behavioral scientist. 272 pages, \$6.95

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edited by *Bruce Mazlish*

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A NEW PRESIDENT FOR M.I.T.

*The Institute's Corporation
elects Howard W. Johnson,
Dean of the Sloan School*

Huntington Hall at M.I.T. filled rapidly at 11:30 A.M. on December 20. Western Union messages had notified the Faculty of the meeting, but few knew what Chairman James R. Killian, Jr., '26, of the Corporation would announce when President Julius A. Stratton, '23, called the meeting to order. Dr. Killian quickly ended the suspense:

Dean Howard W. Johnson of the Alfred P. Sloan School of Management would be the 12th president of M.I.T. Unanimously elected earlier that morning after being unanimously recommended by the Corporation's Committee on Succession and its Executive Committee, Dean Johnson had accepted without hesitation.

The applause was hearty and prolonged. Many of those present had bade Dean Johnson farewell the preceding week. He had been scheduled to become executive vice-president of Federated Department Stores, Inc., on January 1, and his furniture already had been shipped from his home in Lexington, Mass., to Cincinnati.

Chairman James B. Fisk, '31, of the Committee on Succession spoke briefly, emphasizing the committee's labors and agreement. Vannevar Bush, '16, Honorary Chairman of the Corporation, recalled his first remarks in that same room (10-250) 45 years earlier and his impressions of past Administrations. He then predicted "a new quantum of advance" for the Institute. Drs. Killian and Stratton spoke with similar enthusiasm.

Dean Johnson, after expressing his gratitude for the Faculty's reception of the news, emphasized his awareness of the responsibilities entrusted to him. The crowded hall was remarkably quiet between the bursts of applause, and there was laughter only once—when Dr. Killian asked the throng present to consider the news confidential until 6:00 P.M.



PRESIDENT-ELECT HOWARD WESLEY JOHNSON

That afternoon Dean Johnson faced the television and news cameras. Federated Department Stores, Inc., had graciously released him from the position he had accepted earlier, he said, but he would serve the firm briefly as a consultant before assuming the presidency of the Institute next July 1. In response to other questions posed, he said he foresaw no change in M.I.T.'s posture.

Dean Johnson is 43 years old, a native of Chicago, and has been a member of the M.I.T. Faculty for 10 years. He succeeded E. P. Brooks, '17, as dean six years ago. In Dr. Killian's words:

"M.I.T.'s president-elect has an impressive record of achievement in teaching, in educational administration, and in public service. Under his innovative and decisive leadership, the Sloan School of Management has made rapid progress. As a participant in the Institute's central academic councils, Dean Johnson has contributed unflinching and influentially to academic policy-making for M.I.T. as a whole. He has helped to pioneer management education in numerous foreign countries. Altogether he has built a record which commands wholehearted respect and admiration both within and without M.I.T. I have counted it a privilege to have him as a friend and colleague and now look forward with the deepest satisfaction to the continuance of this happy relationship and to the opportunity to support him in his new and great responsibilities.

"In seeking a new President of the Institute, the Corporation, aided by an able Committee on Succession appointed a year ago, consulted widely both within and without M.I.T. As a result of this extensive search, it came enthusiastically to the conclusion that Dean Johnson was superbly qualified to succeed Dr. Stratton as President. The Institute is fortunate in Dean Johnson's acceptance of the Corporation's invitation to serve as President, and he has in very full measure our confidence, our support, and our warm esteem."

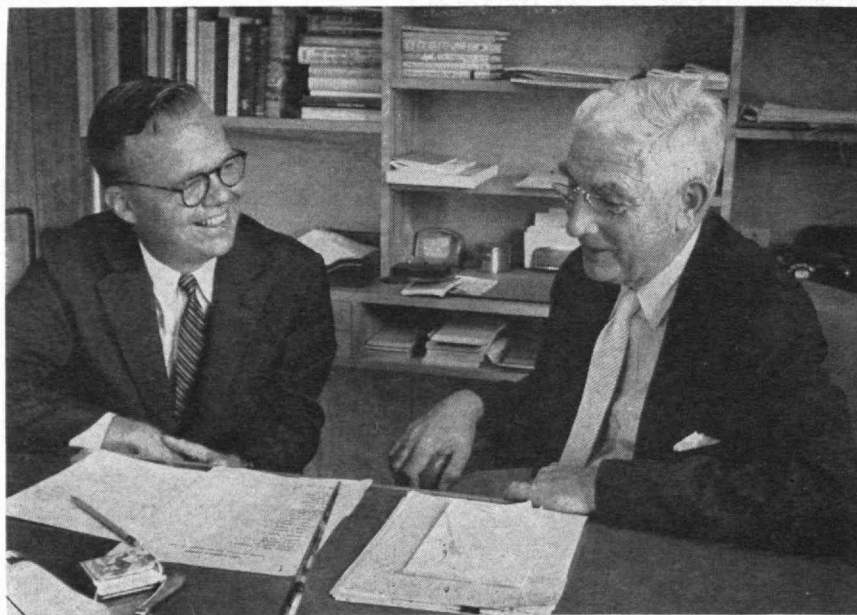
New York *Herald Tribune* readers found a three-column headline on the front page the morning of December 21 saying, "M.I.T. Hires Back a Top Dean by Making Him President," and The New York *Times* headlined a profile of him: "Educator in Demand."

Dean Johnson will be the second social scientist to head the Institute. The first was Francis Amasa Walker, who was president from 1881 to 1897, one of the great periods of development of the Institute.

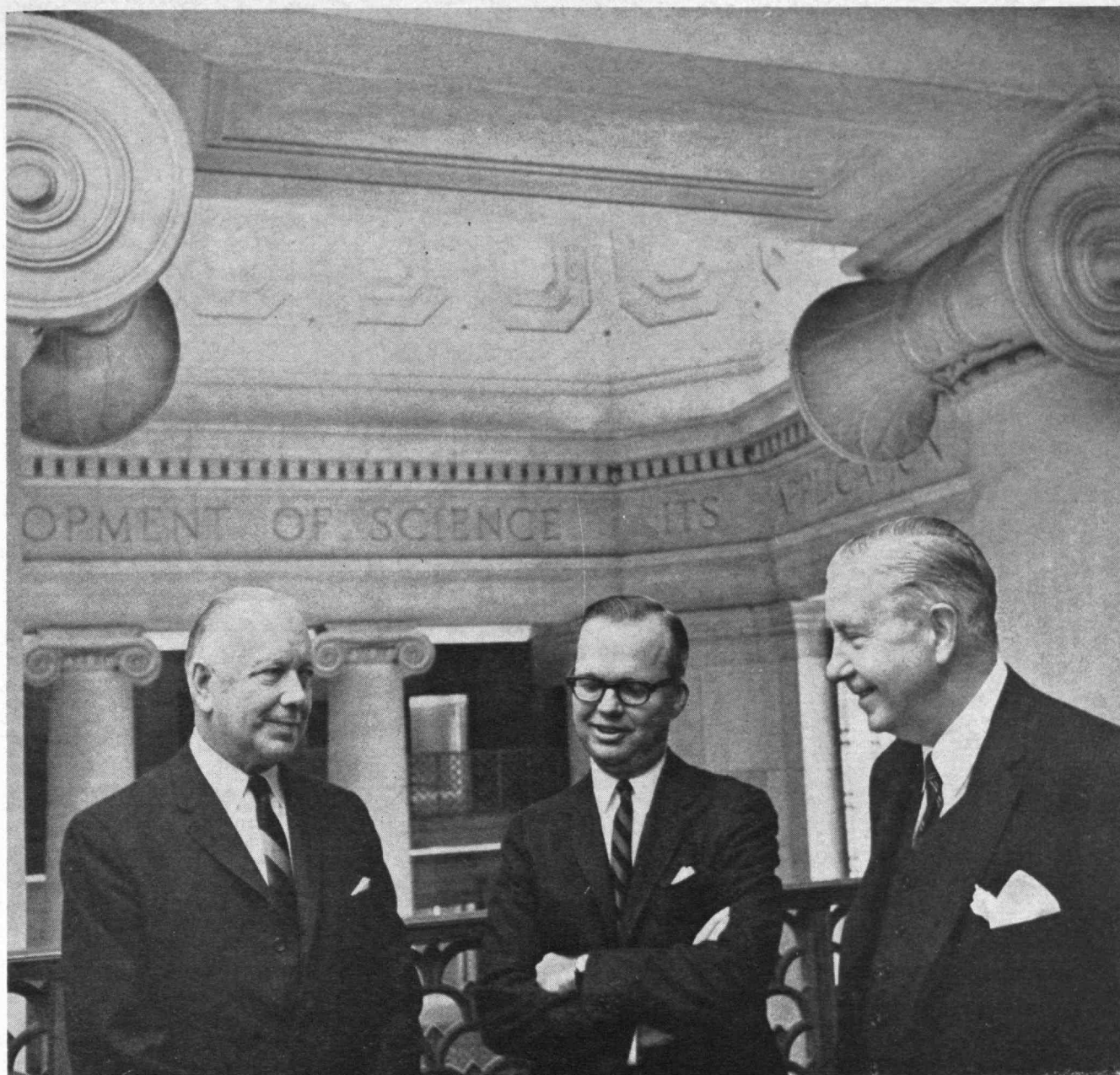
Dean Johnson has administered the Sloan School during a period of great vitality in its educational activities. Teaching in industrial management began at M.I.T. in 1914 but was given new impetus in 1950 when the Alfred P. Sloan Foundation made a large grant for the establishment of the school. Alfred P. Sloan, Jr., '95, now Honorary Chairman of the General Motors Board of Directors, has had a profound and continuing interest in the school and has been an enthusiastic supporter of Dean Johnson and his policies. Mr. Sloan contributed toward the construction of the Grover M. Hermann Building which now adjoins the Sloan Building and houses its related Dewey Library as well as related social science facilities. Completed last October, this is the first new building on the Sloan Campus. Construction is now under way for a 30-story tower to house married students and Faculty members.

The Sloan School's scope and depth in education and research have been conspicuously extended under Dean Johnson's leadership. A doctoral program was begun in 1960 and the school now has more than 50 students working toward Ph.D. degrees among its 300 graduate students. The Faculty has been strengthened and major research programs have been started in finance, organization, information and control systems, industrial dynamics, and the management of large-scale, technology-based enterprises.

The school also has been a leader in mid-career education for executives. The Alfred P. Sloan Fellowship



Dean Johnson (left) with his predecessor, Dean Emeritus E. P. Brooks, '17, in 1959.



After the announcement, President-elect Johnson posed for photographers with President Stratton (left) and Dr. Killian.

Program, in which each year some 45 promising young executives from industry spend a full 12 months of study, was one of the first such programs in the country. Dean Johnson was responsible for establishing a Program for Senior Executives, under which more mature senior officers of companies may spend nine weeks studying at the Sloan School, and this program recently completed its 20th session. He also established the Greater Boston Executive Program, in which businessmen from the community participate in part-time studies.

Interests of the school are now international. Dean Johnson has given assistance in a program for the development of executives in India and the establishment of the Indian Institute of Management at Calcutta. The Sloan School also sponsors a program under which M.I.T. Fellows are sent to Africa and South America to give much needed service as expert junior officers and

managers in governmental agencies and corporations.

The next president of M.I.T. was graduated in 1943 from Central College in Chicago (where his parents, Mr. and Mrs. A. H. Johnson still live, at 7449 Kingston Avenue), and then served in the Infantry and Military Government in Europe and Africa.

After study at the University of Glasgow in Scotland, Dean Johnson became a graduate student at the University of Chicago, where he received the M.A. degree in economics in 1947. He conducted research in the Industrial Relations Center of the University of Chicago and became director of management programs for the center in 1948. In 1951 he was made assistant professor of industrial management and business administration in the School of Business and the Division of Social Sciences at the university.

(Concluded on page 41)



John M. Davis shows components of solar plasma detector. Box at right is collector, the other is memory unit.

Solar Plasma Probe Launched

A solar plasma detector designed and built at M.I.T. is aboard the unmanned Pioneer 6 spacecraft launched December 16 from Cape Kennedy. In an orbit that takes it inward toward the sun, the probe is expected to report on unexplored regions of the solar winds. The detector is the seventh such device that M.I.T. has placed aboard spacecraft launched by the National Aeronautics and Space Administration.

The equipment on Pioneer 6 is designed to measure the number, density, energies, and direction of flow of the particles that make up the solar wind. It is sensitive to electrons with energies from 100 to 1,400 electron volts, protons in the energy range from 40 to 10,000 electron volts, and it can measure particle fluxes between 400,000 and four billion per square centimeter per second.

The complete instrument includes a core memory unit of 256 six-bit words that was built by Robert E. McMahon, '55, and John D. McCarron, '63, of Lincoln Laboratory. Scientific investigators include Herbert S. Bridge, '50, and Alan J. Lazarus, '53, of the M.I.T. Laboratory for Nuclear Science.

Life Sciences Conference

Discussions of topics that mark some of the frontiers of biology drew more than 600 scientists to M.I.T. on December 2 and 3 for an International Conference on the Life Sciences. The conference, under the chairmanship of Dean Jerome B. Wiesner of the School of Science, was held on the occasion of the dedication of M.I.T.'s new Whitaker Building.

Speakers at the first session dealt with the general subject, "Molecular Structure and Functional Organization of Cellular Constituents." They were Dr. Francis H. C. Crick, of the Medical Research Council for Molecular Biology, Cambridge, England—"Structure and Function of Nucleic Acids"; Dr. Daniel E. Koshland, of the University of California (Berkeley)—"The Structure and Function of Enzymes," and Dr. Tracy M. Sonneborn, of the University of Indiana—"Genetic and Molecular Patterns of Cellular Organization." Professor Salvador E. Luria of M.I.T. was chairman.

The second session, on "Adaptation and Functional Coordination," was under the chairmanship of Professor Patrick D. Wall of M.I.T. Speakers and their topics were Dr. John Z. Young, of University College, London—"The Mnemon—A Unit of Memory"; Dr. Vincent G. Dethier, of the University of Pennsylvania—"Mechanisms of Behavior," and Professor Theodore H. Bullock, of the University of California (Los Angeles)—"Functional Integration in Nervous Systems."

Papers at the last session were on "The Future of Man and the Life Sciences." Speakers were R. Ritchie Calder, of Edinburgh University—"The Mathematics of Hunger"; Dr. Clement L. Markert, of Yale University—"The Life Sciences and Population Growth," and Dr. Roger Revelle, of Harvard University—"Human Needs and Human Resources—The Edge of the Knife." Chairman was Professor Samuel A. Goldblith, '40, of M.I.T.

Lake Erie in Miniature

An elaborate scale model of Lake Erie is under construction at the State University of New York at Buffalo as part of a study by Ralph R. Rumer, Jr., '62, to determine the dynamic behavior and mixing processes of the lake. The miniature lake will be about 12 feet long, three feet wide, and will have an average depth of about four inches.

Dr. Rumer, an associate professor of civil engineering, said the study will help determine the usefulness of such a model and, if successful, can be applied to practical questions such as the distribution and dilution of large flows of contaminants into a lake.

(Continued on page 34)

A Century of LIFE SCIENCES at M.I.T.

They are fast becoming one of the Institute's major areas of study, of concern to almost all departments

By Professor Irwin W. Sizer | Head of the Department of Biology

One does not ordinarily associate the subject of the life sciences with the early history of M.I.T. When the Institute opened its doors in 1865, one of the six original courses of instruction was "Science and Literature." Some biology was included in this course because President William Barton Rogers, Professor of Geology and Physics, had considerable interest in paleontology and probably taught some biology.

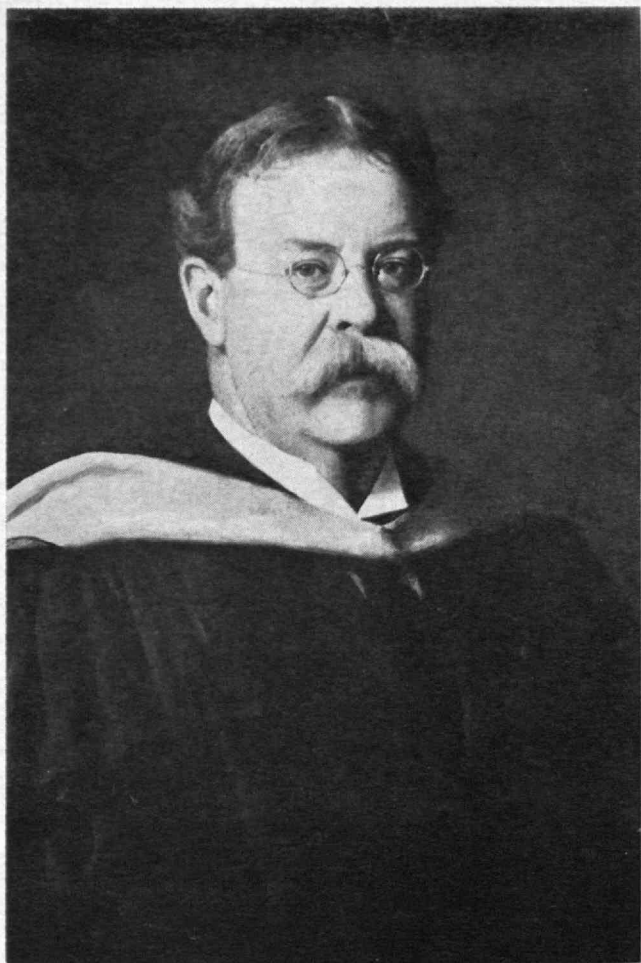
It was soon apparent, however, that the Institute needed a full-time professor whose responsibilities would be primarily in the life sciences. Indeed the need was so critical that President Rogers suggested that the salary for the new biologist be paid out of his own stipend of \$2,500 per year. With this inducement, Dr. Samuel Kneeland, a medical clinician, was appointed the first Professor of Zoology and Physiology in 1867. Further impetus to the teaching of biology was afforded by the subsequent appointment in 1878 of Alpheus Hyatt as Professor of Paleontology and Zoology. Hyatt was a student of Agassiz at Harvard and was well trained in classical biology and paleontology and contributed greatly to the development of biology at M.I.T. It was he who organized and became the first president of the Marine Biological Laboratory at Woods Hole in 1888. Since then, M.I.T. has been closely associated with marine research at Woods Hole.

In 1871 a new course (VII), "Natural History," was established to prepare those "whose ultimate objective is the special pursuit of geology, mineralogy, botany, zoology, or to prepare for medicine, pharmacy, or rural economy." This course flourished under Kneeland and Hyatt and was further strengthened in 1883 when William Thompson Sedgwick, a graduate of Yale University, came from Johns Hopkins University as an Assistant Professor of Biology. In the following years, under Sedgwick's leadership, M.I.T. won renown as a center for the life sciences relating to microbiology and public health. Sedgwick himself was broadly trained in bio-

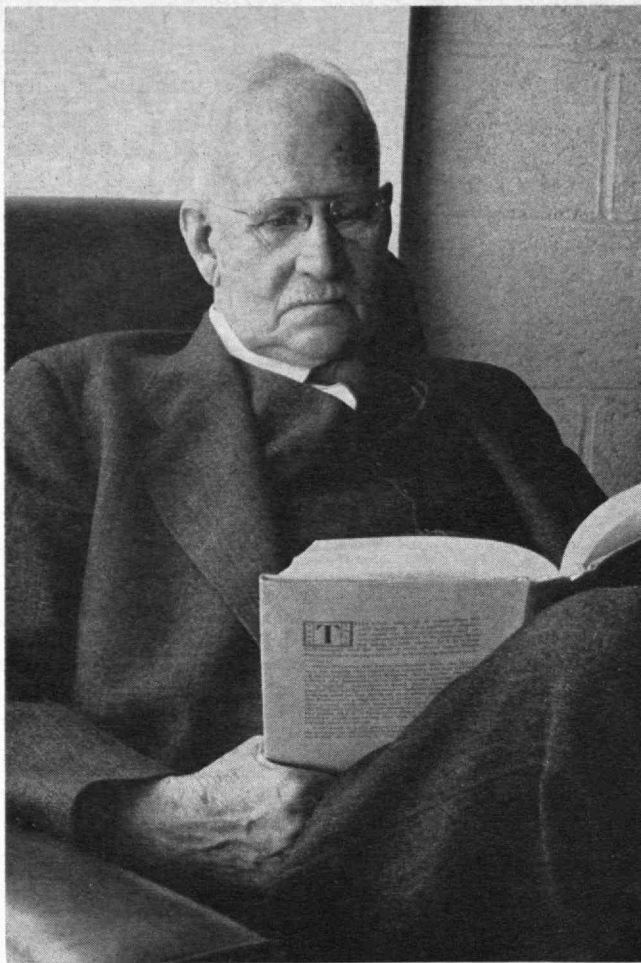
chemistry and in basic medical sciences at Yale. He then transferred to Hopkins where he studied the effects of drugs upon the nervous system and received the Ph.D. degree in physiology. Upon coming to M.I.T., however, he began to apply the new knowledge of microbiology, developed in Europe by Pasteur and Koch, to the fields of sanitation and public health. In a brilliant series of studies he and his students succeeded in relating an epidemic of typhoid fever, which swept down the Merrimac Valley, to the contamination of the river by sewage which drained into it. Further investigations of this type firmly established Sedgwick as the "father of American epidemiology" and have provided detailed knowledge of the relationship of disease to pollution of water supplies.

At the same time that Sedgwick was carrying on this outstanding research program, he set up a curriculum designed to train premedical students (Course VIIB). This course included chemistry, physics, general biology, comparative anatomy, histology, and physiology as the core subjects and is not unlike the current curriculum for premedical students in many universities. It was probably the first in the United States to place the preparation for medicine on a firm scientific basis. Such training was far ahead of its time, however, and it was not well thought of by most medical schools which preferred candidates who had majored in liberal arts.

In 1889 a new Department of Biology was established under Sedgwick's leadership which not only included premedical training but emphasized bacteriology and sanitary biology. The early work on water supplies led to similar studies on food supplies and major interest was aroused in the bacteriology of foods which was further developed under Samuel C. Prescott, '94. The emphasis of the department upon public health problems led to a change in name to "Biology and Public Health," in 1911. Although the research program of the department was primarily in sanitation, the train-



William T. Sedgwick applied microbiology to public health and was a leader in preventing pollution of water supplies.



Samuel C. Prescott, '94, made a basic contribution to the development of the United States canned food industry.



Food processing on a dockside (as shown in Boston's Museum of Science) before M.I.T. research led to modern canning techniques.

ing of students remained basic. Professor Sedgwick (with E. B. Wilson) wrote the textbook *An Introduction to General Biology* in 1886 which emphasized the use of type organisms for teaching basic principles. As late as 1940, students were still dissecting the earthworm and the fern in the Biology laboratory course in accordance with Sedgwick's directions. Today students in the same beginning laboratory use the ultracentrifuge and the oscilloscope to study molecular and systems biology and to illustrate these same basic principles.

After Professor Sedgwick's death in 1921, Professor Prescott headed the department until 1942. He also served with distinction as Dean of Science during the last 10 years of this period. In collaboration with William L. Underwood, '98, a part-time member of the department, Prescott developed procedures for the sterilization of canned foods which were basic to the development of the canned food industry in the United States. An exhibit of this proud achievement is now in the Boston Museum of Science. From this work on food sterilization an interest developed in all aspects of the preservation and processing of foods which led to the establishment of the new field of Food Technology at M.I.T.

In 1936, a committee made up of President Karl T. Compton, Vice-president Vannevar Bush, '16, and Professor John W. M. Bunker proposed that M.I.T. develop a new type of biology, Biological Engineering, which would utilize basic knowledge of physics, math, and chemistry as well as the fields of engineering. A new curriculum was devised to train students for this new field and Francis O. Schmitt came to M.I.T. in 1942 to head the new department, now called "Biology and Biological Engineering." Training in public health was abandoned at this time because this field had become dominated by the medical profession. The new curriculum offered majors in biology and food technology, as well as biological engineering with emphasis on biophysics and biochemistry.

The teaching and research relating to foods developed to such an extent that it became necessary in 1944 to establish the first Department of Food Technology in the United States under the guidance of Professor William L. Campbell, '15, a leader in the food industry. At this time, the title of the original department reverted to "Biology." The subject of food technology at M.I.T. was further developed to world prominence in many areas under the leadership of Professor Bernard E. Proctor, '23, who from 1952-1959 pioneered the sterilization of food by irradiation. In 1961, Professor Nevin S. Scrimshaw became head of a new graduate Department of Nutrition and Food Science which was designed to train students more basically in food-related sciences than did the old Department of Food Technology. In this new department emphasis has been given to problems of human nutrition and the metabolism of foods as well as food chemistry, bacteriology, and food engineering.

The Department of Biology was reorganized in 1955 by Professor Irwin W. Sizer, and molecular biology was further developed with emphasis upon biophysics, biochemistry, microbiology, and physiology-developmental

biology. In addition to the undergraduate and graduate training, a strong program for postdoctoral training of M.D.'s as well as Ph.D.'s has been developed.

In 1964, a Clinical Research Center was established at M.I.T. to provide facilities for all of the Faculty who wish to carry on research with human patients and volunteers. This facility, which further strengthens M.I.T.'s efforts in postdoctoral medical training and research, is extensively utilized by both the Departments of Biology and of Nutrition and Food Science.

A new Center for the Life Sciences was established in December, 1965, when the Whitaker Building was dedicated. The Center will include all of the teaching and research of the Departments of Biology and of Nutrition and Food Science. This program will encompass all of the work in the Whitaker and Dorrance buildings as well as many of the laboratories in the Communications Center and in the Daggett Building. The Center for the Life Sciences will make possible the integration and co-ordination of courses, seminars, and research in the two departments while maintaining the autonomy of each. It should also restore to M.I.T. the original concept of the Life Sciences developed under Professor Sedgwick.

Although the life sciences are mainly concentrated in the Departments of Biology and of Nutrition and Food Science, they have become so important that there is scarcely a department at M.I.T. or a research center which is not concerned in some way with the life sciences. The training of students is still primarily the prerogative of these two departments with about 100 undergraduates enrolled in the life sciences and about 80 graduate students in Biology and a similar number in Nutrition and Food Science. Both departments are involved in extensive postdoctoral training programs.

The Directory of Current Research for 1965 lists 1,203 research projects at M.I.T. Of these about one-quarter are clearly in the field of the life sciences. Only one-third of these, however, are carried on in the Life Sciences Center. The remainder are scattered throughout the Schools of Engineering, Science, and Humanities with special concentration in the Departments of Psychology, Physics, Chemistry, and Electrical Engineering, and in the Research Laboratory of Electronics.

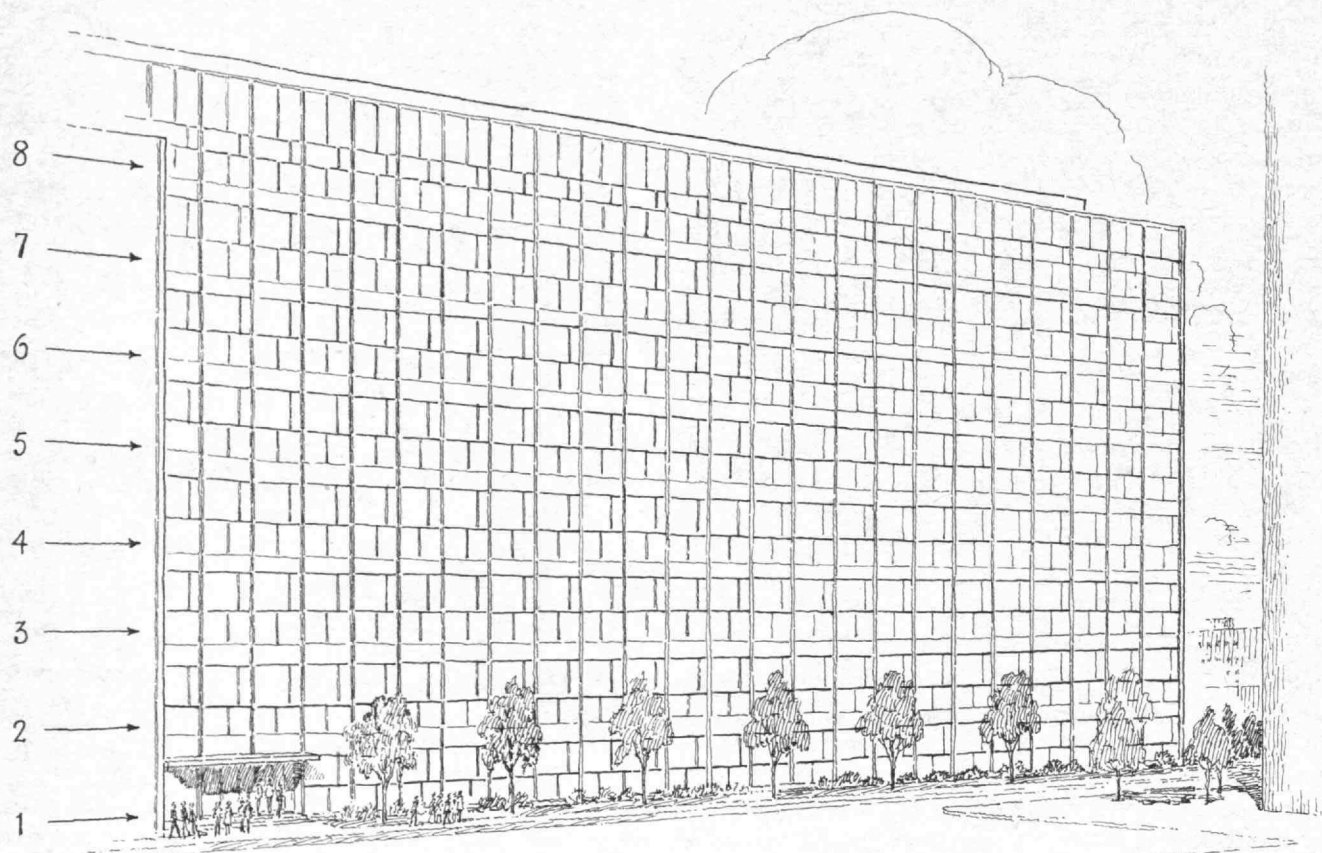
The School of Engineering has developed a strong interest in the training of students in the field of biomedical engineering. Special attention will be devoted to the training of medical investigators. The Center for the Life Sciences is collaborating closely in the development of this new program and will offer special course work for bioengineers.

Many influences are now at work throughout the world to increase scientific endeavor in the life sciences. The creation of the Center for Life Sciences and the completion of the Whitaker Building assure that the life sciences will continue to be one of the principal teaching and research interests at M.I.T., extending and broadening the contributions in biophysics, biochemistry, microbiology, physiology, food science, and nutrition which have brought growing distinction to the Institute since its founding more than a century ago.

UNCAS A. AND HELEN F. WHITAKER BUILDING

CENTER FOR LIFE SCIENCES

MASSACHUSETTS INSTITUTE OF TECHNOLOGY



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2 • Nutrition and Food Science

3 • Nutrition and Food Science
Biology

4 • Biology · Microbiology

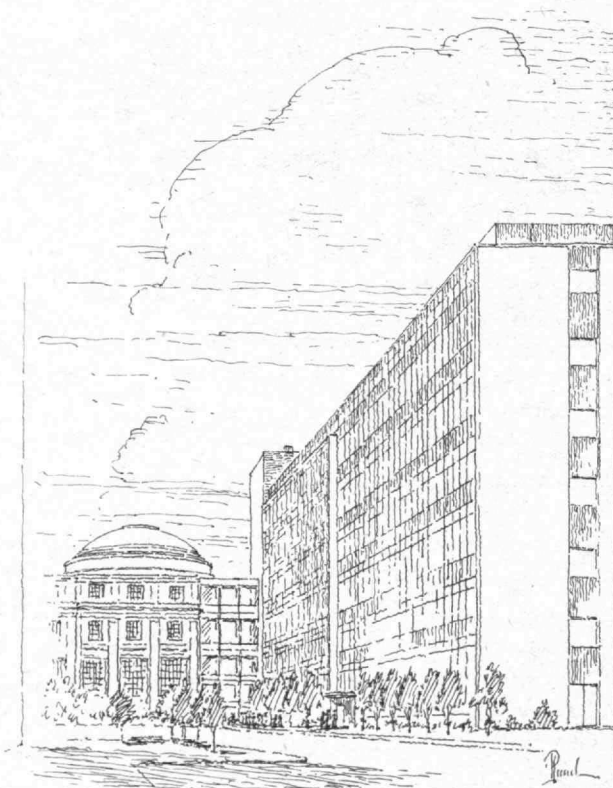
5 • Biology · Physiology

6 • Biology · Biochemistry

7 • Biology · Biophysics

8 • Nutrition and Food Science
Animal Quarters

Basement • Teaching Laboratories and Shops



STRUCTURE OF LIFE: ORDER IN COMPLEXITY

Molecular biology is giving us new insights into the cell's blueprint, biochemical tools, and organization

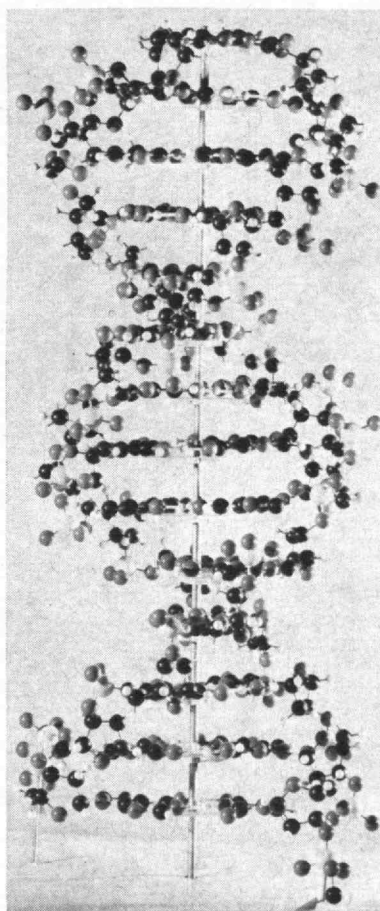
By Salvador E. Luria | Sedgwick Professor of Biology, M.I.T.

The essence of life is organization. A living organism is a mechanism whose complexity is exquisitely geared to the performance of elaborate tasks: reproduction, locomotion, energy exchanges, reactions to the environment, and adaptive evolution.

The complexity of the living world is not like that of a weirdly complicated crazy quilt. It is an orderly one, strictly hierarchical in its organization. Each organism consists of smoothly interacting organs and tissues, which in turn are made up of myriads of cells, each working on its own but subject to controlling influences exerted by other cells. The cell is the true microcosm of life: it is a self-contained piece of machinery, the perfected product of successful evolution, whose general plan is good enough to fit all kinds of tissues, organs, and organisms, yet flexible enough to allow innumerable variations for the performance of extremely difficult tasks.

It is the triumph of modern biology to have achieved a deep, if still incomplete, understanding of the organization of this marvelously successful unit of life, the cell. This achievement has been made possible by successful merging of two sciences that started from very different points of departure: genetics, the study of the historical continuity of the living organism, and biochemistry, the study of the unit processes that take place in living cells. The modern synthesis achieved by these two sciences is commonly defined as molecular biology. It visualizes and uncovers the hierarchical organization of the cell machinery. It recognizes in it three distinct, yet inseparable levels, comparable in a way to those observable in a complex automated machine: the blueprint, the operational tool, and the over-all pattern of structure.

The first level is that of the blueprint, the genetic apparatus consisting of nucleic acid, which is not only metaphorically but in physical reality the tape on which are coded instructions for the manufacture of all components of a cell. In fact, as in an ideal self-duplicating machine, the coded tape carries the instructions for its own copying and is therefore potentially immortal.



The structure of the basic genetic material—deoxyribonucleic acid or DNA—was elucidated in 1953 by J. D. Watson and F. H. C. Crick, a discovery that won them the Nobel Prize for Medicine and Physiology. The peculiar structure of DNA makes it uniquely suitable for encoding and dispatching the messages that determine the structure and regulate the function of all molecular species of the cell. The messages sent off by the DNA are themselves molecules of a nucleic acid—ribonucleic acid or RNA—which in certain viruses can actually represent the genetic material itself.

(Continued on page 42)

Toward a New Bestiary

As any zoologist and every octopus know, the latter is an apt student of its environment. It has survived many millions of years longer than any vertebrate. It learns quickly, and can be taught easily to discriminate between rough and smooth objects or between vertical and horizontal patterns. Not so the fly. At least one investigator has failed completely in 15 years of trying to teach a fly to do something. The tobacco hornworm, on the other hand, has a more advanced nervous system but shows a curious behavior in feeding; although it can survive nutritionally on many plants, it will starve if the proper ones are not available.

Scientists have become increasingly interested in such neurophysiological traits among these and other creatures of the planet, and engineers, intrigued by the novel circuitry that has come to light, have sought to apply the new knowledge to electronics. After M.I.T.'s Jerome Y. Lettvin, '47, discovered that the frog's eye does considerable preliminary data processing,* one large company started work on a

machine that would use a similar system to read printed material.

Studies are continuing, and new information about the neurophysiology of the octopus, the fly, the tobacco hornworm—and the cricket, too—was presented at the second session of the International Symposium on the Life Sciences held December 2 and 3 at M.I.T.

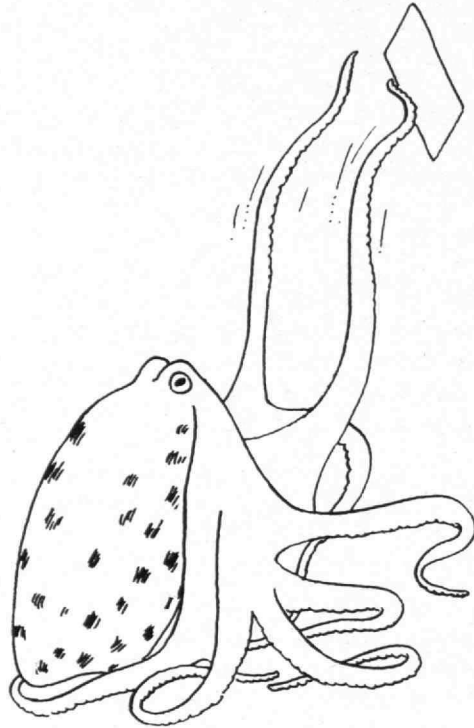
Like the frog's "bug detector," neurons of the octopus's brain that are selective for specific features are in effect classifying cells, according to Professor John Z. Young, of University College, London. In higher animals, classification involves not only a few neurons but more complicated systems throughout the brain. In any event, if an animal can learn "there must be two or more possible outcomes," Professor Young contends.

For example, the first time an octopus sees a horizontal rectangle, it usually attacks cautiously. If it receives food after each showing, it

soon comes to attack swiftly. Conversely, if the animal is taught to avoid the rectangle, attacks will cease. Therefore, says Dr. Young, "the cells that classify for 'horizontal' must be potentially connected to both 'attack' and 'retreat' mechanisms." On the basis of signals from receptors, learning thus consists "in alteration of the probability of use of the two channels," he says.

How does this work? Professor Young suggests that so-called amacrine cells, "which obviously cannot be concerned with conduction of signals to a distance," in fact are triggered to produce an inhibitory substance that blocks or switches off the "wrong" response pathway.

From anatomical and behavioral studies, Professor Young hypothesizes that the octopus has individual memory modules, which he calls "mnemons," each consisting of a classifying cell and attendant small amacrine cells. In the octopus's memory lobes are also neurons with



Drawings by Henry B. Kane, '24



*From The Technology Review, April, 1963.

two or more axons, a feature that supports the idea of a two-channel system.

Reliable performance depends on the switching of a sufficient number of mnemons, says Professor Young; usually this requires several exposures to a stimulus, but only one may be necessary, an assumption that agrees with extensive evidence of one-trial learning. "In man," he notes, "we usually remember the first occasion of contact with a person or situation."

A fly fails to learn not only on one trial but on many, Professor Vincent G. Dethier, of the University of Pennsylvania, reports. Nevertheless, it provides an interesting example of low level of control and, on the issue of studying creatures other than man, he remarks that "in viewing the animal kingdom, man in his most normal aspect is an aberrant animal." Seventy-five per cent of the so-called biosphere consists of insects, which show many behavior patterns.

The fly itself is only "an energy machine" and has a rigid stimulus control in which, so far as can be determined, the central nervous system operates only as a relay. Its taste receptors are hairs, each having five neurons—one sensitive to bending, one to water, one to specific carbohydrates, one to salt, and one, says Professor Dethier, "to the future edification of graduate students."

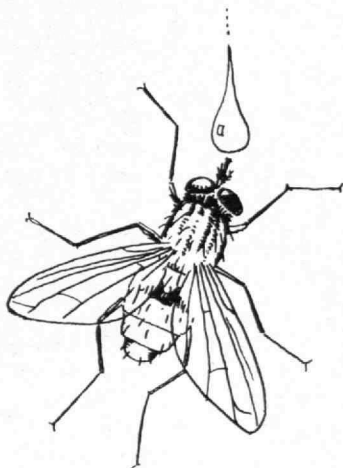
When a fly stops feeding, its receptors undergo a disadaptation, he says, but the feedback system that accomplishes this proved elusive at first. Investigating blood sugar levels, he found they had no effect, even when two flies were joined so that they shared the same blood system. Neither was there feedback from the alimentary canal, a point that was demonstrated in "an heroic experiment" in which flies were given a "hyper enema" to fill the alimentary canal with food.

However, surgery on the fly revealed a nerve from the taste receptors to the fly's birdlike crop. When this nerve is severed, a fly continues to feed—overcoming hydrostatic pressure in its crop—until it bursts.

Although the tobacco hornworm has a similar feedback mechanism, its sensory input is marvelously more complex. To make its very

circumspect selection among plants, it has 16 olfactory and eight taste receptors. Unlike the specific classifying cells of a frog's eye, no hornworm receptor is attuned to any one odor; in fact, the receptors work in combinations, reports Dr. Dethier.

Recordings from microelectrodes showed, for example, that the aroma of tomatoes stimulated one large-amplitude fiber, potatoes affected cells of medium amplitude, and essence of dandelion and carrot evoked varying responses of



different cells. After tests with 42 plant odors, Professor Dethier concludes that the hornworm's receptors "are not narrow-band filters"; rather they have a wide range of activity, with overlapping sensitivity among cells.

Thus complex information goes to the hornworm's central nervous system, where decisions on food are made. In contrast to the fly, the caterpillar is capable of learning and modifying its behavior.

On yet a higher level is the

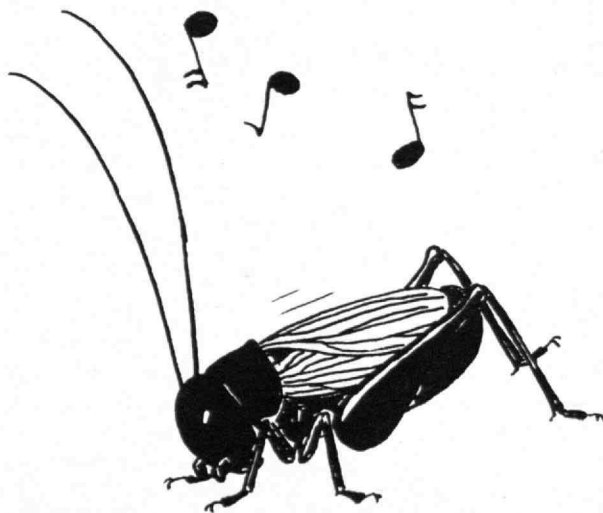
cricket, which sings different territorial and courtship songs. Experimenters have found that they can evoke either song at will by stimulating different parts of the cricket's central nervous system, thus showing that such decisions come from higher up.

As regards the fly, it is indeed a rare phenomenon if the fly is unable to learn, says Professor Dethier. But, he asks, "does stupidity lie at the door of the fly or of the experimenter?" The truth may be, he suggests, that the latter may not yet know how to teach a fly.

Such may be the case, and Professor Theodore Bullock, of the University of California at Los Angeles, suggests that "the vast complexity already known and the performance to be explained" make studies of the nervous system the greatest reservoir of unknown basic principles in biology.

There is a new wave of fresh work, he reported, on the simplest nervous systems in corals, hydroids, and sea urchins. Scientists also have discovered new forms of communication between nerve cells, including low-pass electronic bridges, and they have evidence of pulse and phase codes in the nerves of lobsters, snails, and electric fish, some of which appear to be sensitive to phase changes of as little as one one-hundredth of a millisecond.

Professor Bullock also reported research on molluscs and arthropods which indicates that certain of their cells may be able to distinguish between micropatterns in nerve pulses. In these studies, he said, biologists are in the midst of a new phase of learning about the statistical nature of the nervous system.



M.I.T. dedicates its new
building for life sciences

'In the Year 12 A. DNA'

M.I.T. dedicated its second building for the life sciences last December 3, just 12 years after the opening of the first, the John Thompson Dorrance Building. James R. Killian, Jr., '26, presiding at the recent dedication, took note of the brief interval and said it indicated the extent to which the life sciences had flourished at M.I.T. The principal speaker was Dr. George W. Beadle, President of the University of Chicago, and he found an interesting historical coincidence: 1953 was also the year in which the basic genetic molecule was first elucidated and thus, he said, "We are now in the Year 12 A. DNA."

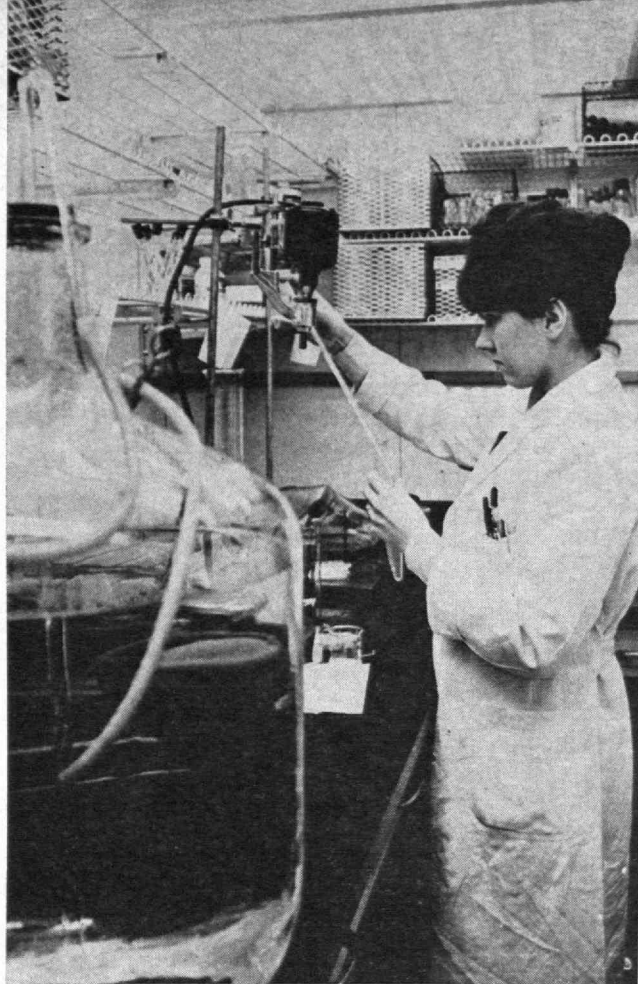
The new Uncas A. ['23] and Helen F. Whitaker Building in effect establishes the M.I.T. Center for the Life Sciences, said Dr. Killian. In presenting the building to the Institute, Mr. Whitaker noted that M.I.T.'s resources in the physical sciences had aided the biological disciplines, and President Julius A. Stratton, '23, in



Mr. and Mrs. Whitaker shown above in the lobby of the new life sciences building that bears their names.

accepting the building from his classmate, said it testified to M.I.T.'s deeper commitment to these studies. Dr. Nevin S. Scrimshaw, Head of the Department of Nutrition and Food Science, and Irwin W. Sizer, Head of the Department of Biology, spoke on behalf of the two Departments that occupy the building.

The eight-story building, which more than doubles space for the life sciences, was made possible by a gift from Mr. and Mrs. Whitaker, a research facilities grant from the National Institutes of Health, and by gifts



A biology technical assistant at work in one of 22 controlled environment rooms in the \$5,800,000 Whitaker Building.

from individuals, foundations, and corporations to M.I.T.'s Second Century Fund. Mr. Whitaker, of Harrisburg, Pa., is chairman of the Board of Directors of AMP Incorporated, and a member of the M.I.T. Corporation.

In his address, Dr. Beadle remarked that "biological and cultural evolution are interdependent, both in the sense that the nervous system is constructed according to DNA instructions and because cultural advance confers a Darwinian selective advantage of those individuals best endowed genetically to receive and use it."

To a certain extent, he said, man can control biological inheritance, an ability that is important to agriculture. "The same measures can be and are to a limited degree made use of by man in determining his own future evolution," he said, adding: "This understanding is likewise of great significance in understanding and circumventing genetic disease in man." The latter study, which he termed euphenics, can be extended to embrace cultural inheritance, which man can control to a much greater degree.

Thus, cultural euphenics "has highly significant implications in education, in cultural change in new nations, and in cultural enrichment of disadvantaged segments of less favored groups," he said. Important in this regard, he noted, is the fact that we have only recently learned that cultural experience begins early in life and that "in many respects the most receptive years are the preschool ones."

THE TWO SIDES OF CRISIS

*As we face the danger inherent in the unequal wealth
of nations, we can borrow wisdom from a foreign tongue*

By Samuel A. Goldblith, '40 | Professor of Food Science

*"We sail a changeful sea through halcyon days
and storm,
and when the ship laboureth, our steadfast pur-
pose*

*Trembles like as the compass in a binnacle.
Our stability is but balance, and wisdom lies
in masterful administration of the unforeseen."*

—Robert Bridges, *The Testament of Beauty*

Man's ability to transform himself from a nomadic food seeker and hunter to a food cultivator, farmer and producer, has had much to do with population growth. Food preservation became a necessity when distances arose between the producers and the users. Without salting, dehydration or fermentation, even traveling by camel would have been impossible during the days when nomadism was commonplace. As the distances between consumer and producer have been increased by urbanization and industrial developments, the needs for improvement in methods of food preservation have increased.

Advances in the sciences have been responsible to a large measure for the benefits of civilization that we enjoy today in the developed countries. Among the greatest contributions to science in the Eighteenth and Nineteenth Centuries were the discoveries of Jenner, Pasteur, Koch, Lister, Ehrlich, and others. These demonstrated that certain diseases may be caused by positive etiological agents, and that through knowledge of these causative agents those diseases might be controlled and eradicated by immunization, improved public health practices, sanitation, insecticides, antibiotics, and other chemotherapeutic agents.

The Twentieth Century ushered in a new era in the diagnosis, prevention, and control of diseases that result from deficiencies of essential nutrients. Hopkins, Funk, McCollum, and others showed that "deficiency diseases" were caused by the absence of very small amounts of nutrients known as "vitamins." At first, this concept was not readily accepted. Nevertheless, the genius and reputation of F. Gowland Hopkins of Cam-

bridge (England), who was perhaps the leading biochemist of his day, convinced his fellow scientists and physicians of the existence of these "accessory food factors" and of their role in certain diseases such as beriberi.

Then came recognition of the protein deficiency diseases in undernourished populations in underdeveloped countries, and the development of dietary regimes for their control. Although the treatment of these diseases, kwashiorkor and marasmus, is well known, they are still a formidable public health problem because of the shortage of protein in many areas of the world coupled with food habits and taboos.

Thus, nutrition has been transformed from a science of simple energetics to one involving multiple factors whose interrelationships we are now, some 60 years later, just beginning to understand.

In more recent years, the medical sciences, particularly biochemistry and genetics, have made some strides in attempting to solve the mysteries of afflictions such as cancer, cardiovascular disease, mental illness, and stroke. Breakthroughs of the same order as the accomplishments of a Jenner, Pasteur, Koch, or Watson and Crick, are needed, however, before we can really approach the basic problems involved in these diseases and thus embark on definitive and effective approaches to their cure.

Advances in the life sciences to date have brought a greater average life span, lower infant mortality, and better health. Moreover, what formerly took 100 years to achieve in terms of life expectancy in Western countries can be accomplished now in developing countries in 10 or 20 years.

In turn, an important effect on these later developments has been the slow inactivation of one of the biological checks of population control—that of high mortality rates. Perhaps the last truly great epidemic, in terms of its effects on world population, was the great bubonic plague of the Fourteenth Century. Yet the world faces a crisis today because the vast resources of our planet and

the technological skills are *not* all available *uniformly* throughout the earth. As civilization is developing, the gap between the "haves" and the "have nots" is becoming greater. To produce calories and protein sufficient for the world's population is not enough. One must, as Calder has stated, "get the necessary food into the hungry bellies."

The ancient Chinese word "crisis" is made up of two characters. One means "danger" and the second "opportunity."

The danger has been argued and discussed often. The suggested remedies of more foods, better transportation, application of new preservation techniques, fish farming, synthetic foods, and other measures in the developing countries, where the rate of population increase is greatest, are but palliatives. Applications of medical sci-

tion still continues to increase, it is doing so at a slower and a more manageable rate. Whether the admirable Japanese experience can be repeated in other parts of Asia is debatable although desirable. Transference of such experience to other parts of Asia calls for greater literacy and thus development of understanding of the problems.

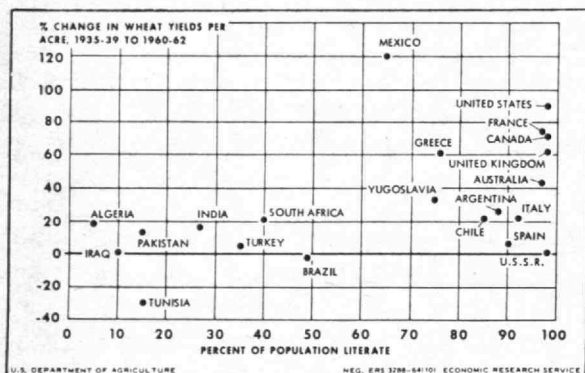
The last 10 years have witnessed tremendous advancements in the biochemistry of the genetic material of cells. We are beginning to develop plausible theories of the origin of life and the evolution of our planet, and we now understand the etiology of a different class of diseases, known as the "molecular diseases," such as sickle cell anemia, and phenylketonuria, which are due to defined genetic defects. Great strides are being made in relating the genetic code to specific biochemical and physiological reactions. Man may be on the verge of knowledge which may enable him to guide at least a part of his evolution, hopefully more wisely than if that evolution were left solely to the forces of nature.

Recognition of a disease such as phenylketonuria and its treatment by amino acid diets is one of the triumphs of genetics and nutrition. Nevertheless, this too is fraught with a certain amount of danger—that of perpetuating a disease which may have been dying out by natural destruction. Other approaches to eliminating this and other molecular diseases from the human population have been suggested. These are based on assays of a particularly susceptible population (susceptible in that it may contain a relatively large number of people carrying the defective gene) for the defective gene, and then making it unlawful for two people carrying the mutant genes to marry or if they do marry, to have children. (If one person carrying the mutant gene marries a person who does not, the probability is that they will have fewer children than the average and thus the disease may die out in this way.)

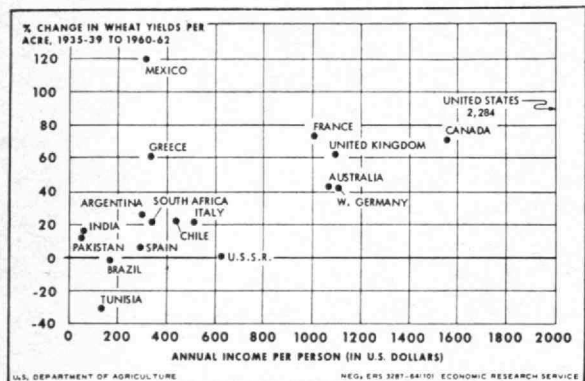
A great deal of discussion has taken place among scientists and sociologists as to the possibility of changing man and his future by manipulation of the genetic material. While we may not be able to originate life in test tubes, we are now better able to understand its origin and the forces that control it. Grave discussions have taken place as to the wisdom and morality of sperm banks, and the implications involved. The ultimate question always is, "Who is to decide what is the desirable genetic material?"

An additional objection that has been raised to sperm banks is that man, at any point of time, really does not have the wisdom to predict what may happen and what may be the requirements of the "ideal man" generations hence. In our generation at least, manipulation of the genetic material and the use of sperm banks probably will not be looked on with favor by the great majority of the population. Nevertheless, studies pertaining thereto will and should continue, as will deep and intelligent inquiries as to whether to maintain a biological *status quo* or to adopt a progressive "go ahead" attitude.

(Concluded on page 43)



Relationship of literacy (top) and income to crop yield.



entific knowledge will help make people healthier and happier, but can cause an even greater disparity between population needs for foods and the supply of available foods.

This, however, need not necessarily be the case. A specific example is Japan, where the population grew from 35 million in 1872 to 71 million in 1940. Then came World War II and nondemographic changes—the emancipation of women, land reform, changes in concept of the emperor, and laws permitting contraception, abortion, and sterilization at least on a limited scale. The death rate has declined as a result of better sanitation, better public health practices, and more literacy. In addition, the birth rate decreased from 28.3 per 1,000 population in 1950 to 17.2 in 1957. While the popula-

Eight professors become
emeriti as of next June

They Retire This Year

William C. Greene, Professor of English at M.I.T., has devoted most of his life to the Institute and in the classroom and in extracurricular activities has striven to enrich the lives of students. A teacher for 41 years, his classes are lively and popular. As adviser to the undergraduate Tech Show and adviser and director of the Staff-Community Players, he has had a leading role in fostering amateur dramatics. In addition, he has been president of the Faculty Club and is now secretary of the Faculty.

A 1922 graduate of Brown University, Professor Greene spent the next three years as a Rhodes Scholar at Oxford and joined the M.I.T. staff on his return. He was promoted to assistant professor in 1931, associate professor in 1942, and became professor of English in 1948. Outside the Institute, he served for a time as director of the Massachusetts Branch of the United Nations Association and has been active in parent-teacher associations. His novel, *A Deeper Root*, was published in 1937. He is seen below conducting a recent class.

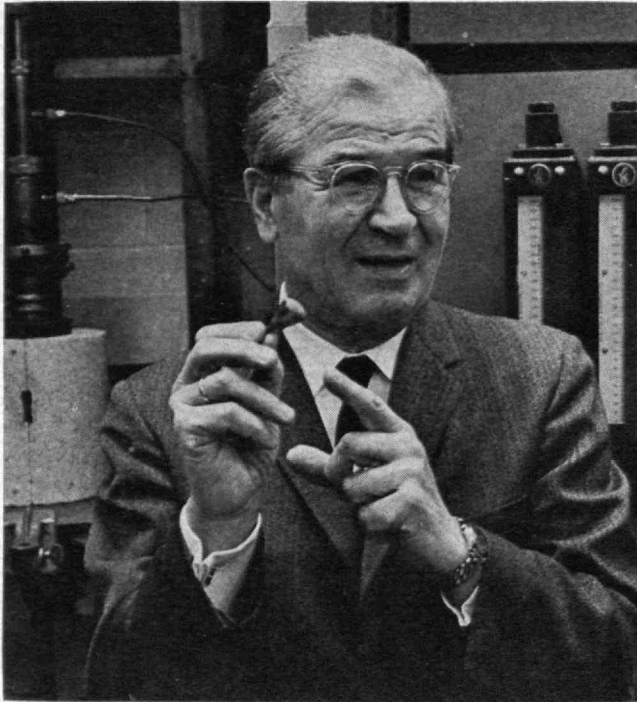


Professor John T. Rule, '21 (above) is an authority on stereoscopic theory and photography but to many M.I.T. men he is probably best known as Dean of Students. He was counsel to undergraduates for five years and when he left that post in 1961 President Julius A. Stratton, '23, wrote that Dean Rule's "sympathetic understanding of the interests and problems of undergraduates and his sincere concern for their welfare have won for him the respect and affection of the entire student community."

Once a Tech student himself, Professor Rule received a bachelor of science degree in 1921 then went on for a year of special work at Harvard. After a number of years in business and industry, he started teaching in 1931 at the Taylor School, in St. Louis, where he was born, and returned to M.I.T. five years later as assistant professor of drawing. Appointed professor in 1947 and head of the general science and general engineering course in 1950, he became professor of engineering graphics in 1951. He returned to teaching that subject after his service as dean.

Professor Rule has studied stereoscopic drawing and motion pictures extensively. During World War II he did research at the Polaroid Corporation and supervised development of the U.S. Navy's Mark I machine gun trainer, in which he applied stereoscopic techniques to simulate combat conditions encountered in aerial warfare.

(Continued on next page)



Professor Joseph H. Keenan, '22 (right) is one of the world's authorities on thermodynamics and two of his publications have had wide influence on the development of modern power and propulsion machinery. His book, *Thermodynamic Properties of Steam*, published 29 years ago, has had about 50 printings and has been a principal guide in the design of equipment throughout the steam power industry.

During World War II he participated in a lengthy survey of aircraft propulsion systems, including jets and fan jets, for the National Advisory Committee for Aeronautics; an outgrowth of this study was a volume, *Gas Tables*, written with Joseph Kaye, '34, which is now used in the design of compression and expansion machinery. It was in recognition of "his outstanding contribution to the permanent engineering literature on steam, air and gases" that the American Society of Mechanical Engineers awarded him the Worcester Reed Warner Medal in 1955.

After graduation from M.I.T., Professor Keenan spent six years with the General Electric Company, then taught at the Stevens Institute of Technology from 1928 to 1934, when he returned to M.I.T. as an associate professor in the Mechanical Engineering Department; later, he served for three years as Head of the Department.

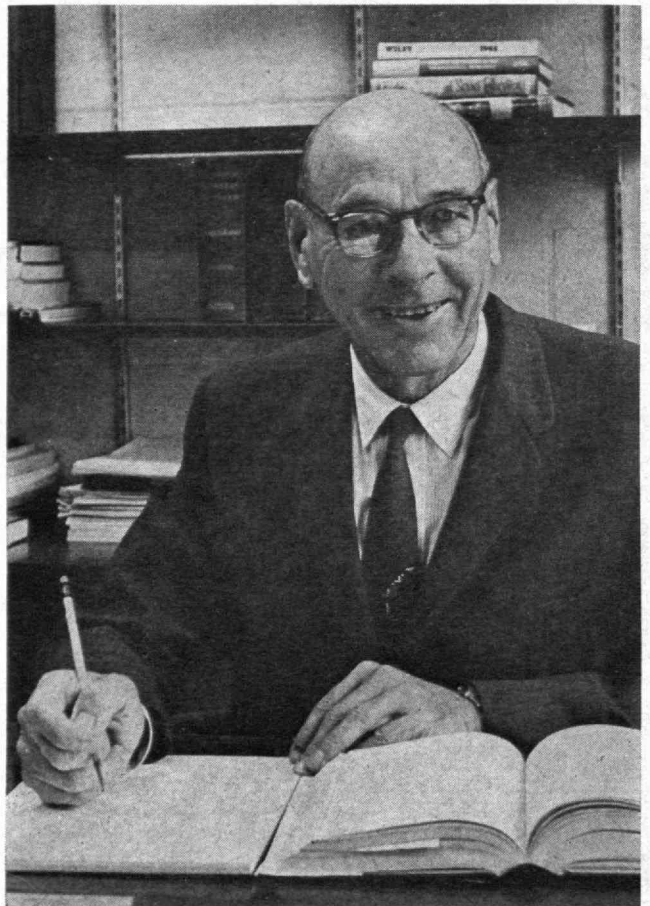
A delegate to six international conferences on the property of steam, Professor Keenan also has lectured abroad. With his knowledge of thermodynamics, he has been a consultant to the coffee industry for 40 years, and in that time has received a number of patents on coffee-roasting machinery.

They Retire This Year

Professor Alexander Smakula has been interested professionally in optical materials ever since he received his doctor of philosophy degree in 1927 from the University of Göttingen. He remained there for three more years as a research associate in the Physikalisches Institut, then became head of optics at the Institute of Physics, in Heidelberg, where he worked on ultraviolet spectroscopy.

In 1934 he went to the Carl Zeiss Company, in Jena, as head of its research department and there he developed a nonreflecting coating for optics, new optical crystals, and optical instrument lubricants capable of withstanding extremes in temperature. He is the author of two books on optical materials and single crystals and his memberships include the Optical Society of America and the American Physical Society.

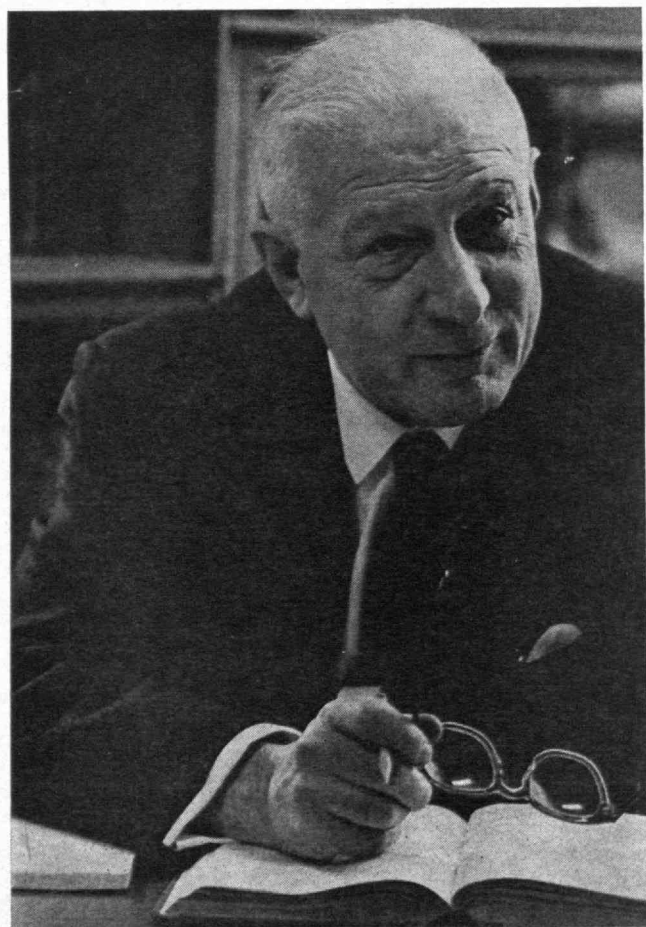
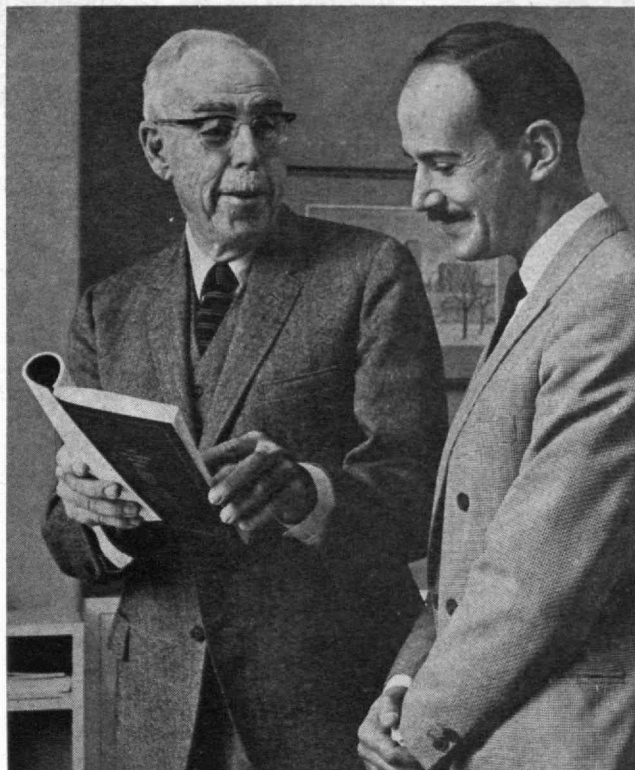
After five years as an engineering consultant to the United States Army at Fort Belvoir, Va., Dr. Smakula came to M.I.T. in 1951 as Associate Director of the Laboratory for Insulation Research. He was appointed Associate Professor in 1959 and in 1962 became professor of crystal physics. He is pictured above, left, as he explains some equipment in his laboratory.



When Paul M. Chalmers became adviser to foreign students in 1944, M.I.T. had 278 undergraduates from other countries, the largest number from China. Since then he has seen the Institute's foreign student body grow to 935, one of the highest proportions of foreign students at any American university. In this post and as Associate Director of Admissions, he has advised the Institute's officers on foreign student matters. In 1948, King Haakon VII of Norway made him a Knight of the Order of St. Olav.

Professor Chalmers studied English literature at Brown University, where he received bachelor's and master's degrees, and has taught at Brown, the Peddie School, and at Lafayette College. Shortly after his graduation in 1922 he spent a year at sea, visiting several countries in the Orient.

He came to M.I.T. in 1939 as an instructor in the Department of English and History. He became assistant professor and assistant director of admissions in 1943, associate professor of English in 1946, and associate director of admissions in 1951. At right he explains a point to Sergio Corres, a student from Mexico.



Antoine M. Gaudin (left), Richards Professor of Mineral Engineering at M.I.T., has followed a traditional family avocation for science and engineering. His paternal grandfather, Marc-Antoine Gaudin, was a well-known chemist and mineralogist and for many years was secretary of the Academy of Sciences in Paris. His father, Paul Augustin Gaudin, was an engineer who worked for a number of years in Turkey, where he was general manager of a French-owned railroad.

Born in Smyrna, Professor Gaudin returned to France with his family in 1908 following the "Young Turk" revolution. After studies at the University of Paris, he came to the United States in 1917 to join his father, who was then in America as a member of the French War Mission. At Columbia University, the younger Gaudin completed a six-year engineering course in four years.

Thereafter he taught at Columbia and at the University of Utah and for 10 years was research professor on the staff of the Montana School of Mines.

An authority on process metallurgy, Professor Gaudin has been particularly active in research on flotation, a method for recovery of fine mineral particles from ores. His reference book, *Flotation*, has been the standard in English on that subject.

In 1952 he was invited to address the Institute of Mining and Metallurgy as the third Sir Julius Wernher Lecturer and in 1957 he received the Richards Award of the American Institute of Mining and Metallurgical Engineers.

(Continued on next page)

John Clarke Slater is a solid state physicist who has been at the forefront of major scientific advances of his time. As a young scientist, he studied with the physicists Werner Heisenberg and Niels Bohr and was associated with the development of the quantum theory. In later research, he made fundamental contributions to the science underlying the transistor. Mervin J. Kelly, former president of Bell Telephone Laboratories, has said: "... had it not been for the prior work of M.I.T.'s Professor John C. Slater and a few other academicians in solid state physics, the team of scientists at Bell Laboratories could not have made the transistor invention."

At M.I.T., Professor Slater has the distinguished titles of Institute Professor and Harry B. Higgins Professor of the Solid State (Physics), and also has been director of the Solid State and Molecular Theory Group.

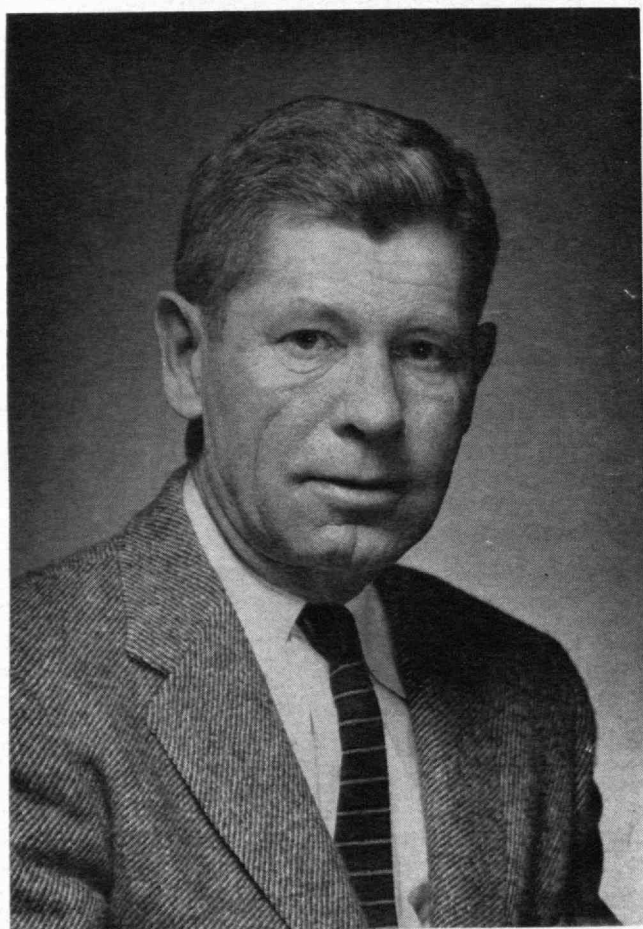
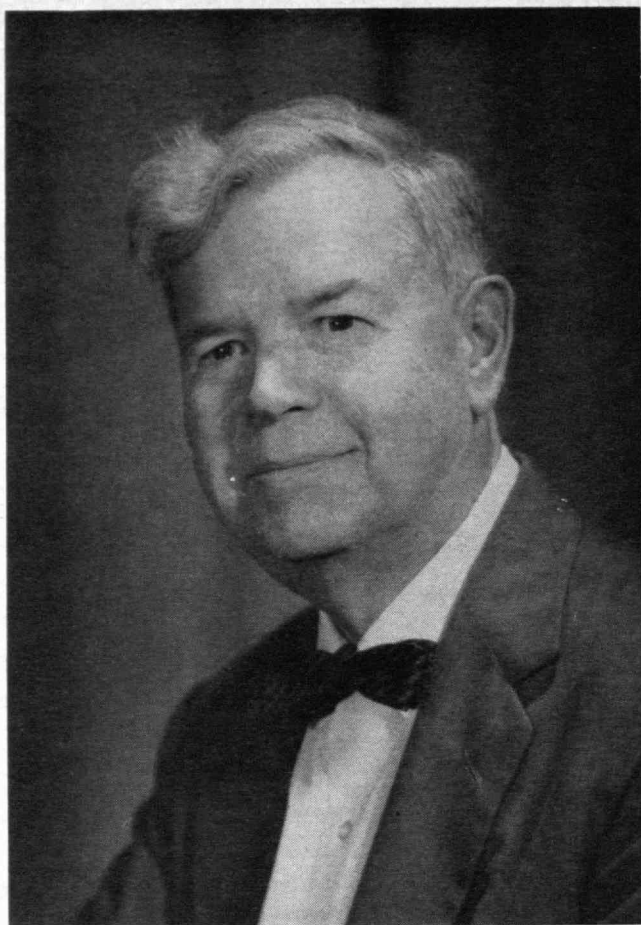
Professor Slater received a bachelor of arts degree in 1920 from the University of Rochester, where his father was professor of English and later head of the English Department. He went to Harvard for advanced degrees, and it was as a Sheldon traveling fellow from Harvard that he studied with Bohr in Copenhagen.

Returning to Harvard, he continued his research on the quantum theory and taught there and also at Stanford University and at the University of Chicago. In 1929 he went abroad as a Guggenheim Fellow, working first in Zurich and later in Leipzig with the physicists Heisenberg and Friedrich Hund.

Professor Slater came to M.I.T. in 1930 as Professor of Physics and Head of the Department of Physics, a position he held for 21 years. During World War II his theoretical work on the magnetron was an important factor in the development of effective radar, and he received the President's Certificate of Merit in 1948 in recognition of his work.

Mineral economics, mine evaluation, and mining and timbering practice are the special interests of Roland D. Parks, Associate Professor of Mineral Industry. He received degrees of bachelor of science and engineer of mines from the Michigan State College of Mines, then did graduate work at the University of Wisconsin.

Professor Parks came to M.I.T. in 1940 after a prominent career as teacher and consultant at the Michigan College of Mining and Technology, where he taught for 19 years. He is a member of the American Institute of Mining and Metallurgical Engineers and the author of numerous articles on his specialties and two books, *Examination and Evaluation of Mineral Property* and *Mine Examination and Evaluation*.



[N]OTABLE NEW BOOKS

DAY OF TRINITY, by Lansing Lamont (*New York: Atheneum Publishers*, 1965, \$6.95).

Reviewed by Cyril Stanley Smith, '26,
Institute Professor

This is likely to be the most popular of the many books about the wartime atom bomb project that appeared to mark the twentieth anniversary of Hiroshima and Nagasaki. It is a gripping account of an important technological event and holds the reader's interest more than any of the current crop of thrillers.

"Trinity" was the code name applied to the complex of operations involved in the first test of a nuclear explosion, culminating in a reaction occupying a few microseconds just before dawn on July 16, 1945. The Oscura Mountains were briefly illuminated by a blinding light; slowly the fireball rose to form the now-too-familiar mushroom cloud; the radiation monitoring crew tracked the first fallout; the service personnel began to pack up; scientists saw success—and prepared for the next explosion which would be less clearly an occasion for self-congratulation.

Lamont's book is concerned only with the last stages of the development of the bomb, to which the explosion formed the climax. It does not describe the vast organization that provided the fissionable material for it, or the background of the momentous decision to use it against two enemy cities. Even the flashbacks to Truman and Stalin at the Potsdam meeting, which give international perspective, make no contribution to the analysis of the moral or political problems posed by man's unreadiness for the new knowledge. I cannot concur however with the current criticism of Lamont in Cambridge cocktail parties for failing to reflect the scientist's deep concern with the ultimate political consequences of their work. Those at Chicago did indeed have time to reflect (and to endeavor to deflect the use of the bomb), but at Los Alamos the participants were too busy with doing their own bit of the job up to the very last days, and even normally independent-minded people became inevitably polarized toward a single objective, realizing too late that the organization they had helped to build had developed a momentum that was virtually beyond control.

Although Lamont's writing does convey rather accurately the color and spirit of the event, it is far from being a well-balanced historical study. There is an absurd overemphasis on the role of the spies, Fuchs and Greenglass—they were not saboteurs and they became important only in the subsequent atmosphere of the Cold War. And the author clearly favors a "human-interest" story about the obscure or the famous in preference to the verifiable messy details on which the events

and their significance actually hung. His simplified science is often wrong, many of his anecdotes distort the facts and some are obviously false—for example, Einstein was never at Los Alamos and could not have exchanged pleasantries with a GI.

Kenneth Bainbridge, '25, is the central figure, almost the hero of the book, for this young physicist had come from his mass spectrograph at Harvard, via an important part in the Radiation Laboratory at M.I.T., to take full control of all aspects of the greatest engineering test that had ever been done. He did a superb job of coordinating the innumerable specialized skills that were required.

Day of Trinity may help to dispel public ignorance on the nature of engineering activity. The test was engineering, even though most of the leading participants were pure scientists. It seems to have been concluded, or found by sad experience, that engineers in the 1940's—except for some in the armed services—lacked the flexibility needed for such a big jump into the unknown. Since then, the dividing line between science and engineering has become less clear.

Can one praise a book as journalism and criticize it as history? Is it more important to catch the spirit of a past series of happenings—which Lamont does excellently—or to strive to record the more significant details with as much accuracy as possible so that later students with new perspectives may have a basis from which to reach different conclusions—which he does hardly at all? M.I.T. Alumni in particular should read this enthralling book, for it raises many questions on the purposes of technical activity and on the character of popular writing.

Books You Should Know About

Recent publications especially likely to interest M.I.T. Alumni have included:

ACCIDENT RESEARCH, Methods and Approaches, by Dr. William Haddon, Jr., '49, Edward A. Suchman, and David Klein (Harper & Row, \$15). Dr. Haddon is associate director of the Division of Chronic Disease Services, New York State Department of Health.

The Political Cultures of Massachusetts, by Edgar Litt (The M.I.T. Press, \$5.95). The author is associate professor of political science at the University of Wisconsin, Milwaukee, and his manuscript was critically reviewed by Professor Robert C. Wood of M.I.T.

The Scientific Endeavor (The Rockefeller Institute Press, \$2.50). Addresses given at the centennial celebration of the National Academy of Sciences by Dean Jerome B. Wiesner, Professor Victor F. Weisskopf of M.I.T., and other noted scholars, on the history of the university, the nature of matter, and the determinants and evolution of life.

The Journey to Ise

*Last year The M.I.T. Press published an English edition of **Ise: Prototype of Japanese Architecture**, by Kenzo Tange and Noboru Kawazoe, with photographs by Yoshio Watanabe. Tange, a leading Japanese architect, taught at M.I.T. during 1959-1960 and *The Technology Review* of that year carried a report on his buildings. The English edition was suggested by John E. Burchard, '23, Dean Emeritus of the M.I.T. School of Humanities and Social Science, and the following is a major excerpt from the introduction he wrote for it.*

The Ise Shrine is not hard to reach physically. You can take an early-morning express train from Nagoya and, after a journey of some 40 miles, change to a two-decker "pilgrim express" equipped with vista domes and head phones by every seat. This will speed you another 35 miles to Ise-City, the station for the Shrine. When you detrain, you will be faced with an outpost of the Japanese Travel Bureau if you need it. A few miles in a taxi and a half mile or so of walking in towering cryptomeria groves will take you either to the Third Century Naiku Shrine of the Sun Goddess, Amaterasu-Omikami, or to the Fifth Century Geku Shrine of Toyouke-Omikami, Goddess of Farms, Crops, Food, Sericulture—a Japanese Ceres. The two shrines are only four miles apart, and an American tourist can quickly "see" them both before a pleasant lunch at Yamada or a continuation of his journey to the fisheries at Toba, where the women pearl divers are at work. A good many of the organized tours include the pearl divers; only one, the longest, includes the Ise Shrines, and then for only an hour. This is reasonable. The Ise Shrines are *not* hard to reach physically. The spiritual journey is longer.

It is longer at least for most Westerners. Every Japanese should make the pilgrimage to Ise if possible, at least once in his lifetime. Hence, the precincts are full of Japanese most of the time.

The precincts are very old, pre-Buddhist, and pre-Chinese. They are very holy. Even now very few people are admitted to the inner sanctums. The precincts have been very Imperial, and the high priestess is usually a daughter of the Emperor. Until the last war, besides the crown jewels the other important Imperial regalia were the sacred "grass-growing" sword kept at the Atsuta Shrine in Nagoya and the "Ise-Mirror," which is still in the Naiku Shrine.

The buildings at both shrines are very old and very new. They are very old because they are identical with the ones that stood there at least as early as 685. They are archaically pure. They are very new because they are ceremonially rebuilt every 20 years. Carpenters in spotless white repair to the sacred forests on the Kiso Moun-

tains to cut the new timber. They bathe frequently; if blood should fall on any stick, it would be rejected.

Two alternately used enclosures stand side by side. In the empty one the new group of buildings is made in the image of the existing ones. At the night of change the simple symbols of the godly presence are transferred to the new shrine. Then the old buildings are dismantled and their sanctified materials put to good work somewhere else.

This is of course interesting and mysterious and even moving, but it does not supply an impelling reason for most Western tourists to go to Ise. Nor can many wish to visit Ise just because it offers an important piece of evidence about Japanese architectural history.

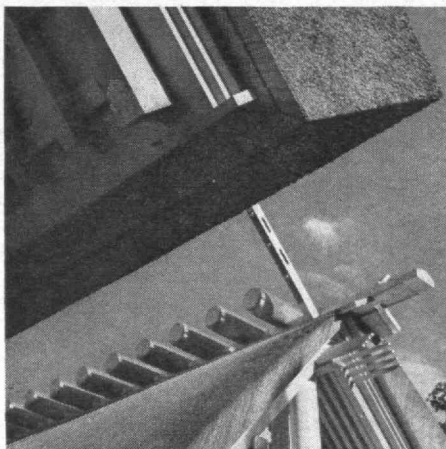
The buildings themselves have what Fosco Maraini called a "heroic simplicity." They are made of plain cypress, cedar, and thatch with a few metal ornaments. There are no great sculptures, no great polychrome, no intricate spaces to fathom. There are great refinements, but they are subtle. You can observe the shrine in a five-minute glance, or it might take you five years. But even then you would have to look and think and feel harder than most of us want to do most of the time.

In these circumstances it is not surprising that most Western tourists whisking through Japan find it more appealing to visit the "scenic trio" or to seek out cormorant and pearl fishers, sumo wrestling, tea ceremonies, cherry blossoms, the Miyako Odori, the Kabuki, the puppet drama, or the Noh plays; the forehanded may schedule their visits to coincide with one of the great festivals of lakes or fireworks or lanterns, or even to improve their chances of catching a glimpse of Fuji or encountering fair weather on the Inland Sea. If they are mildly interested in architecture and the arts, they may settle for the big Buddha at Kamakura, the castle of Himeji, the extravagantly detailed mausolea of the Tokugawa at Nikko. With more sophistication they may seek the temples and shrines at Nara, the wooden statue of Nyoirin-Kannon in the Chuguji nunnery, and the gardens of the Katsura detached palace.

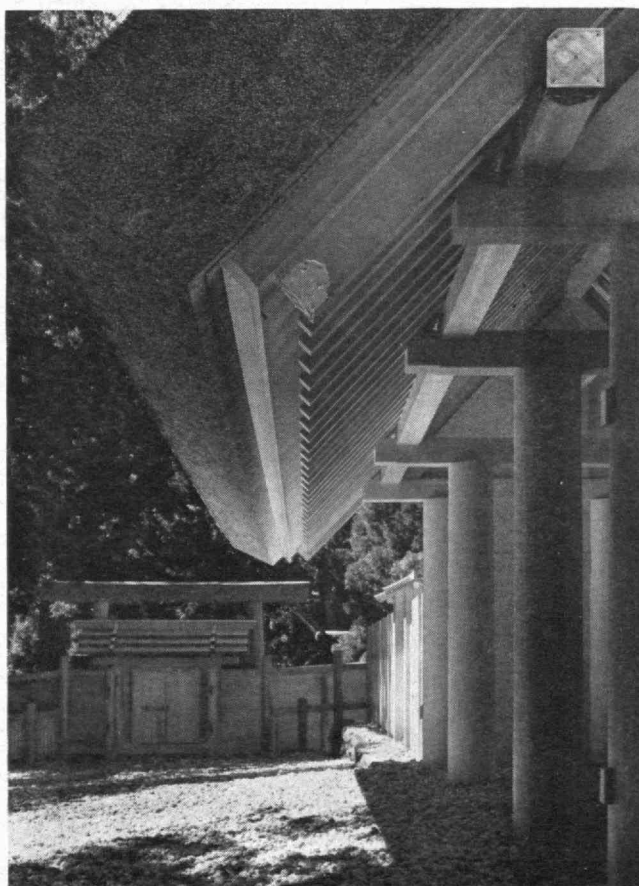
The purest in heart and eye will in the end come to the simple garden of Ryoanji made only of stones, raked white sand, and lichens; or to the shrines of Ise and their modest cypress, cedar, thatch, and metal. After one has visited Ise, Nikko or the Great Buddha will never again seem quite so important. Nor will many Western works.

When Walter Gropius visited Japan he quoted Zen to the Japanese architects: "Develop an infallible technique, and then place yourself at the mercy of inspiration." Ise is pre-Zen. As it is renewed now in the ceremony of *sengushiki*, which will come around again in 1973 and for which preparations are already under way, the mercy of inspiration was bestowed long ago, and we

are left only with infallible technique and memory. Yet they are enough. Ise has many lessons for contemporary architects. There is surely the lesson of devotion, and of craftsmanship, and of infallible technique, all of which seem to have become so slovenly these days. But there is, I suspect, an equally important if more elusive message. Sixty years ago Lafcadio Hearn visited Ise and wrote, "There is nothing imposing but the space, the silence, and the suggestion of the past." Even if suggestions of the past may not be much valued today, and certainly are not to be valued in new buildings, Ise recalls the priceless ingredients of any great architecture anywhere—repose, serenity, and silent space. Perhaps these can be fully achieved only if one believes in something very much—and if the something is greater than architecture.



Views of the buildings, left and below, and the Inner Shrine and the Ise forests, right. Photographs courtesy of Zokeisha Publications, Ltd. Text and photos reproduced by permission of The M.I.T. Press.



(Continued from page 16)

\$2,000,000 Gift for Dormitory

Frank S. MacGregor, '07, has made a gift of \$2,000,000 toward the cost of an undergraduate men's dormitory at M.I.T. Mr. MacGregor spent many years with E. I. du Pont de Nemours & Company and retired in 1948 as general manager of its Electrochemicals Department.

The new dormitory, which will be named in honor of the donor, will cost more than \$4,000,000 and will house 300 students. It will be the first of two such buildings that are being designed by Pietro Belluschi, Dean Emeritus of the School of Architecture and Planning, in association with Architects Collaborative.

"Mr. MacGregor's generous gift will make it possible for the Institute to take a timely step toward a goal which has high priority at the Institute—that of housing a majority of our students on the campus," said James R. Killian, Jr., '26. "At present we can accommodate fewer than half of the 3,500 undergraduate men. After making a careful study, a committee has recommended that we provide quarters for at least 2,000 men, and the M.I.T. Corporation has endorsed this plan.

"The new dormitories will be designed so that they can be operated on the housemaster-tutor system, which we have found most beneficial in fostering student-faculty relationships since its introduction at M.I.T. seven years ago," Dr. Killian said.

The dormitories, the first for men to be built at M.I.T. in about 20 years, will be west of Burton House and Baker House on Memorial Drive. In one direction they will overlook the Charles River, and in the other, Briggs Field.

The projected dormitories are a result of an evaluation program under way at M.I.T. since 1961-1962 when the Institute's Committee on Educational Policy initiated two parallel studies of undergraduate education. One study concerned itself primarily with M.I.T.'s undergraduate curriculum, the second with the non-curricular aspects—especially the role of the residence system.

Space Troubles

Two Lincoln Experimental Satellites (LES-3 and LES-4) designed and built at M.I.T. were aboard the U.S. Air Force Titan III-C launched December 21. A misfiring placed them in different orbits and orientation than planned, but telemetry and beacon signals were received from them.

LES-3 was a radio signal generator designed for measurements of such factors as noise, multipath and antenna system design in satellite communication systems. LES-4 was an all-solid-state communication satellite, receiving and transmitting at x-band frequencies, and equipped with an electronically switched antenna system. Routine watches over the holiday weekend revealed that LES-4 was operating better than was expected on the eve of Santa's ride and it was quickly used in satisfactory communication tests.

Chicago Regional Conference

"Impact of Tomorrow's Technology" will be the theme of an Alumni Regional Conference scheduled for April 2 in Chicago. President Julius A. Stratton, '23, will head a distinguished group of representatives of the M.I.T. Faculty and Administration who will discuss the demands and opportunities that lie ahead in science and engineering.

Speakers will include Charles H. Townes, Provost; Nevin S. Scrimshaw, Head of the Department of Nutrition and Food Science; C. Stark Draper, '26, Head of the Department of Aeronautics and Astronautics and Director, Instrumentation Laboratory; Dean Gordon S. Brown, '31, of the School of Engineering; and Warren G. Bennis, '55, Professor of Management. Meetings will be in the main ballroom of McCormick Place, in Chicago.

Computer Research Opportunities

Post-doctoral Research Associate appointments supported by the International Business Machines Corporation will be available for the 1966-1967 academic year at the M.I.T. Computation Center.

The appointments are in the field of computer science research at the Center and will be based on an application outlining the proposed research program and indicating the applicant's ability to carry the program out. Preference will go to requests for appointments for the full academic year, but in cases of exceptional merit, one-term or summer appointment applications will be considered. Stipends will be based on experience and will not provide for relocation costs. The number of appointments will be determined by the programs planned. The Research Associate at M.I.T. is an academic appointment, and, although no teaching duties will be required, appointees may supervise thesis students.

Applicants should submit an outline of research planned, a statement of graduate courses taken and grades and degrees received, a professional résumé, at least two letters of recommendation, and an indication of the desired appointment period and stipend. The material should be sent before March 1, 1966, to: Director, M.I.T. Computation Center, Room 26-142, Massachusetts Institute of Technology, Cambridge, Mass. 02139.

The Computation Center is an M.I.T. interdepartmental facility providing computing service to 52 other New England colleges as well as to the M.I.T. community. It presently operates an I.B.M. 7094 computer capable of providing both time-sharing computer service from remote consoles and on-site batch-processing service. Both services are designed for general-purpose use; they offer a variety of algebraic, symbol manipulation.

The Center's plans call for adding an I.B.M. System/360 Model 65 to its facilities next summer, then replacing both machines (7094 and Model 65) with an S/360 Model 67 in 1967.

(Concluded on page 47)

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INDIVIDUALS NOTEWORTHY
(Continued from page 10)

Appointed to Cabinet

Prime Minister Lester Pearson of Canada announced his new cabinet members last December 17, and one of the eight appointments was Robert H. Winters, '33, named Minister of Trade and Commerce.

Mr. Winters was president of the M.I.T. Alumni Association in 1963-

1964, and is a member of the M.I.T. Corporation. On being named to the cabinet, he resigned from a number of positions that he had held before his appointment, including his posts as president of the Rio Algoma Mines, Ltd., as president of the Rio Tinto Mining Company of Canada, Ltd., and as chairman of the board of the British Newfoundland Corporation. He is an executive in 19 other major Canadian companies, and is chancellor of York University.

The new minister had been away

from Ottawa since 1957, when he ended an eight-year term as Minister of Public Works in the St. Laurent administration. He returned to politics last November.

In an interview in the *Toronto Star* last December, Mr. Winters said there is an urgent need to make Canadian goods more "competitive" in the world market by lowering prices, reducing trade barriers, and increasing the efficiency of Canadian industry.

(Concluded on page 46)

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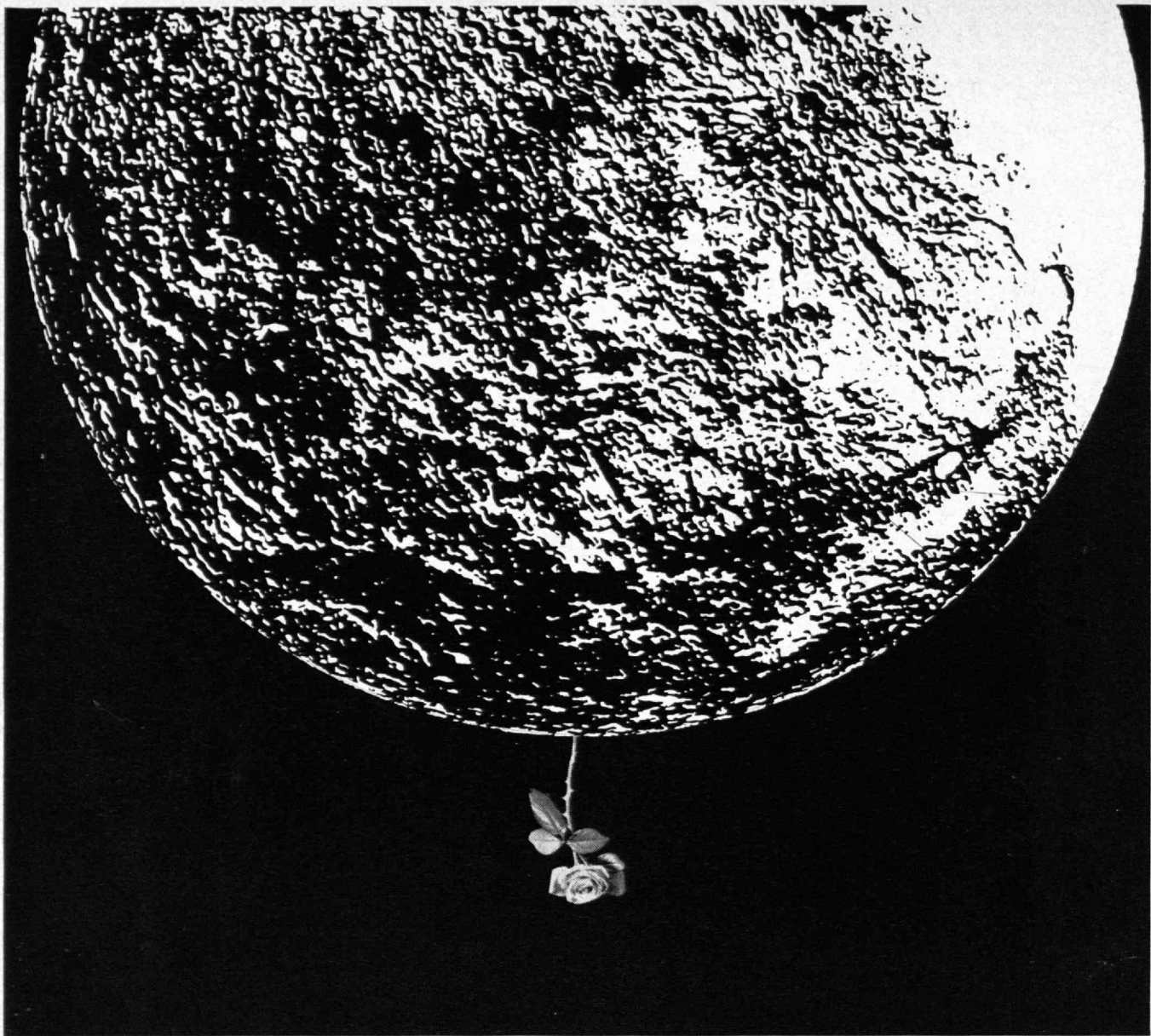
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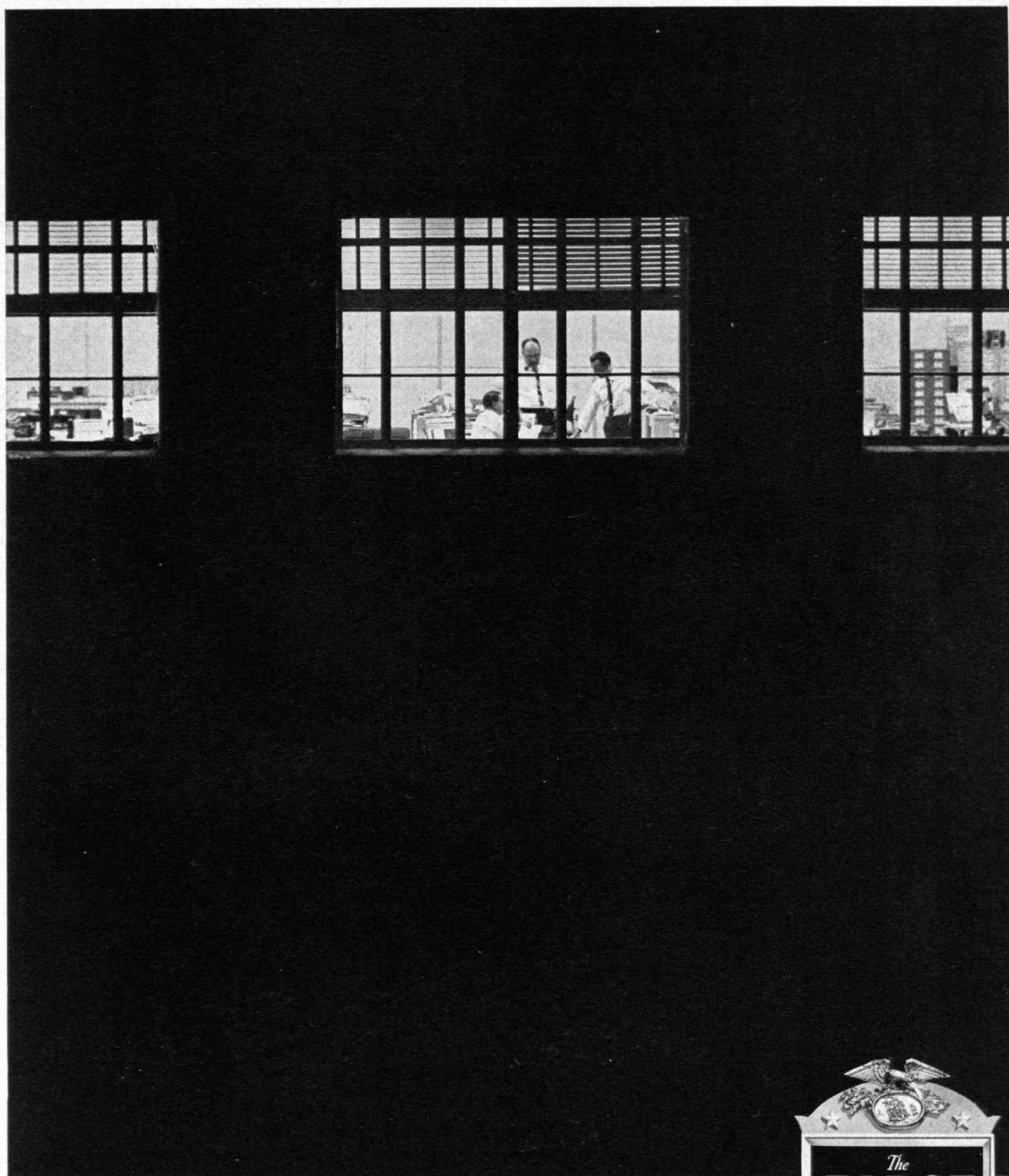
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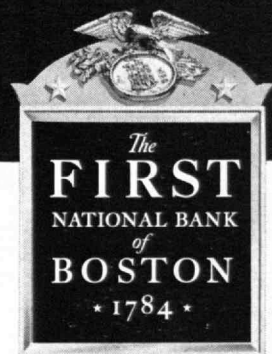
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I NSTITUTE YESTERYEARS

25 Years Ago

Writing in *The Review* for February, 1941, under the title "Technical Progress in Aviation," Professor Jerome C. Hunsaker, '12, observed:

"The increasing importance of the airplane in our normal social and economic life is just now overshadowed by the dominant role of the airplane in our national security. With recent advances in the aeronautical sciences being tested on a grand scale in the proving ground of war, we naturally lose interest in the possibilities of those same advances as they might apply to our peacetime communications. If we hope to live in a world in which individual living is worth while, our thought must be focused on the airplane as an instrument of power—destructive or protective. . . .

"Technical progress in the development of the airplane has been especially marked in the past 10 years. Some steps in the progress have been abrupt, because they were the consequence of inventions. True inventions are unpredictable, but experience has shown that when new knowledge obtained by research and experiment becomes generally known, the invention necessary for the practical application of the knowledge soon follows. Whether designers can then apply the invention to realize a technical improvement in the airplane depends on whether the state of the art is ripe for the advance.

"For example, although the aerodynamic advantages of an unbraced monoplane wing were demonstrated by Fokker in the days of braced biplanes, the safe construction of such wings had to wait for the availability of light aluminum alloys. Likewise the advantage of retracting the landing gear and wheels was recognized at an early date and mechanisms for retraction were invented, but no designer would bother with them until speeds were high enough to make acceptance of the added cost and complication worth while. The designer of transport planes, moreover, needed a thick cantilever

wing to afford space enough to house the wheels in the retracted position. The result was a lag of some 10 years in the general adoption of this improvement.

"Though some technical improvements are thus proposed before the art has advanced sufficiently to permit their use, others come about as a result of difficulties created by advance in the art. When airplanes fly very fast, for example, roughness of their external surfaces is found to be extremely costly in power. As a result, we now have flush rivets, spot-welding techniques, and other means to help make a smooth wing. Another example is the mass balancing of control surfaces to prevent unstable vibration, or flutter, of cantilever wings. Serious flutter trouble was not encountered until experience was had with high-speed monoplanes and particularly dive bombers. . . .

"In general, then, the results of methodical research and experiment lead to new knowledge and to technical progress. Technical progress of itself, however, discloses new difficulties the solution of which requires further research. From the solution of them, additional technical gains may result. . . ."

75 Years Ago

The editor of *The Tech* placed on the record some post mortems anent the recent midyears, to wit:

"A careful observer watching the men here during the first few days after vacation, would have carried away one definite impression—that Tech men have an abnormal amount of inquisitiveness. On all sides, forming part of every greeting, was heard a repeated endeavor by each man to ascertain what records his classmates had made in each study of the preceding term. Exhibited in one form or another, each fellow showed a most positive interest in the standing of the other men in his class.

"And yet, despite these facts and appearances, such an observer would have been wrong. It was not

mere inquisitiveness that led each man to pry into another man's records. They were simply trying to find out what their own might mean. Furnished by the Secretary with a report weighed by some unknown and varying standard, they were endeavoring to obtain definite values for their individual records by comparison with the only available standard, the average work of the class to which each belonged. . . .

"In the broad curriculum of the Institute, where the subjects studied vary through such a wide range of difficulty, in the time and application necessary with each, the only equitable ranking system will be the one in which a man's proportionate knowledge of the subject as taught at the Institute forms the standard of his mark. This is supposed to be the basis of the present marking system. A slight investigation will show that the actual marks diverge widely from this ideal basis."

100 Years Ago

At the 46th Meeting of the "Government," held February 23, 1866, the report of the Finance Committee with its recommendations with respect to the completion of the new Institute Building at 491 Boylston Street, was presented and approved.

Edward Atkinson, upon whose motion the report of the Finance Committee was approved, then "... called attention . . . to the important matter of funds. . . . He stated that the Finance Committee . . . had already taken the initiatory steps for raising funds, and had received from several gentlemen the promise of \$5,000 each, and that a gentleman distinguished for his liberality and for the interest he takes in the prosperity of the Institute, but who prefers not subscribing at present, will contribute \$15,000 towards making up the sum proposed to be raised; namely, \$150,000; of which \$50,000 are to be appropriated for equipping the School, and \$100,000 for completing the Building, liquidating indebtedness and meeting current expenses."

A New President for M.I.T.

(Concluded from page 15)

At M.I.T., he has risen rapidly but quietly since joining the Faculty as associate professor of industrial management and director of the Executive Development Programs of the Sloan School of Management with responsibility for the Sloan Fellowship Program. He became associate dean in 1958 and professor of industrial management and dean of the school in 1959.

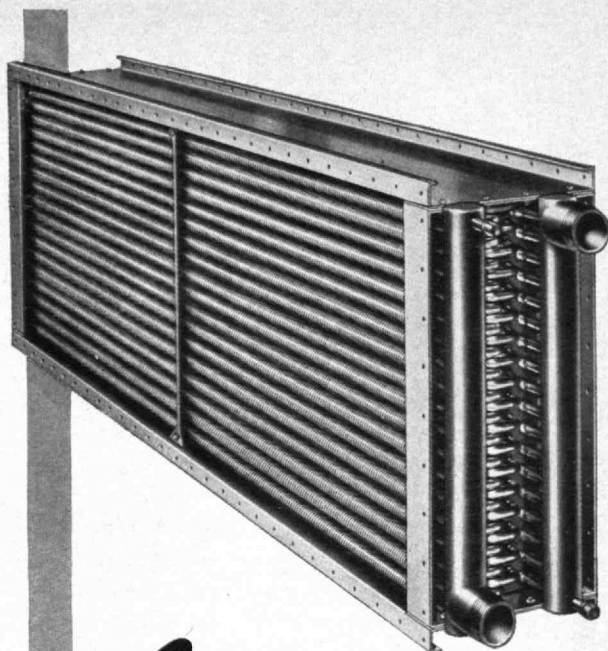
Dean Johnson has written numerous professional papers on management and education. He was a member during the past year of a Panel on Transportation Research for the Department of Commerce and is co-chairman of an Air Force *Ad hoc* Committee for the Review of Not-For-Profit Corporations. He has served as chairman of the board of The M.I.T. Press, a director of the International Teachers Training Institute at Stanford University, a member of the board of visitors of the Air Force Systems Command, and a member of the executive committee of the American Association of Collegiate Schools of Business. He has been an editor for Harper & Row and is a member of the boards of the Draper Corporation, the Harvard Cooperative Society, and the Hitchiner Manufacturing Company and a trustee of the George Putnam Fund. He is a member of the St. Botolph Club and Phi Gamma Delta.

Dean Johnson and his wife, the former Elizabeth Weed of Wilmette, Ill., have three children, Stephen A., 13; Laura A., 11; and Bruce H. Johnson, 10.

The first social scientist to be president of M.I.T., Dr. Walker was a political economist, and was even younger than Dean Johnson, who will be 44 on July 2, the day after he takes office. Dr. Walker (whose birthday also was on July 2) was 40 when he became president.

Dr. Killian, who was appointed to the presidency in 1948 when he was 44 years old (he did not take office until 1949) was a graduate of M.I.T. in industrial management and served as executive vice-president before becoming president. He is the first alumnus to become president of the Institute.

The first president and founder of M.I.T., William Barton Rogers, was a geologist but was a man of such broad interests that he might better be called a natural scientist. He served in office twice, from 1862 to 1870 and again from 1879 to 1881. Karl Taylor Compton, president from 1930 to 1949, was a physicist who was a member of the Princeton University faculty when he was chosen to head the Institute. Dr. Stratton is a physicist and served as a member of the M.I.T. Faculty before becoming provost and vice-president. He became acting president in 1957, when Dr. Killian went to Washington as Special Assistant for Science and Technology to President Eisenhower, and president on January 1, 1959, when Dr. Killian became chairman of the Corporation. Dr. Stratton will reach the mandatory retirement age of 65 and leave the M.I.T. presidency next June 30 to serve as chairman of the Ford Foundation Board of Trustees.



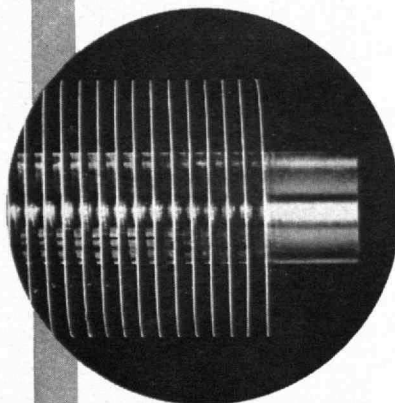
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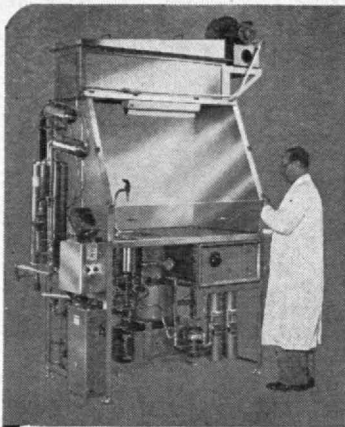


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Structure of Life

(Continued from page 21)

Does the nucleic acid tape that contains the instructions "know" all the details of the structures it determines? This might well be the case if all the relevant information were actually encoded in the tape. In fact, it turns out not to be so. The information in the genes is sufficient to produce the molecules necessary to build the cells, but it only specifies their linear backbone and does not concern itself *directly* with their ultimate structure nor with their location in the cell.

Proteins, which are linear molecules made under the direction of the gene-derived message, do become effective biochemical instruments of the cell—the enzymes—only after they have folded and have assumed a complex three-dimensional structure, which is dictated by the specific structure of the molecules themselves (hence indirectly by the corresponding genes) *but which the genes do not directly check*. It is the specific, complex folding of the protein molecules that creates the operating tools or "active sites" of the enzymes, which catalyze specific chemical reactions in appropriate substrate molecules.

Protein molecules are not rigid, but flexible. According to the theory of "induced fit," proposed by D. E. Koshland, the substrate molecules distort the enzyme in such a way that appropriate chemical groups are brought into contact. Also, other molecules acting at various sites on an enzyme can change its shape in such a way as to improve or decrease the effectiveness of the active site.

If the genes know how to make the biochemical tools and the tools know how to build all necessary parts, including new genes, is there anything more to the building of a cell? In other words, if a set of genes were placed in a favorable environment and supplied with all suitable new materials in plentiful amounts could it proceed to make a cell? Or is there an essential contribution made by the very pattern of cellular organization, the product of the long historical past of cell lines within which the genes have functioned and evolved? We know, of course, that a complex organism like man can be generated by a single cell—the fertilized egg—by the orderly unfolding of intrinsic developmental potentialities. But is this true also of the relation between cell and genes? Or does the existent pattern of cellular organization contribute some essential information to the formation of a new cell? This is one of the most intriguing and puzzling problems of biology. Until recently, only speculation was active in this field. But some exciting advances have recently been forthcoming.

The most remarkable studies have been done by Tracy M. Sonneborn on paramecia, small protozoa whose skin or cortex carries many rows of filaments, called cilia, arranged in very specific orientations. When a fragment of such skin, with a peculiar pattern of ciliary orientation, becomes grafted onto the cell skin of another paramecium with a different pattern, the descendant cells all



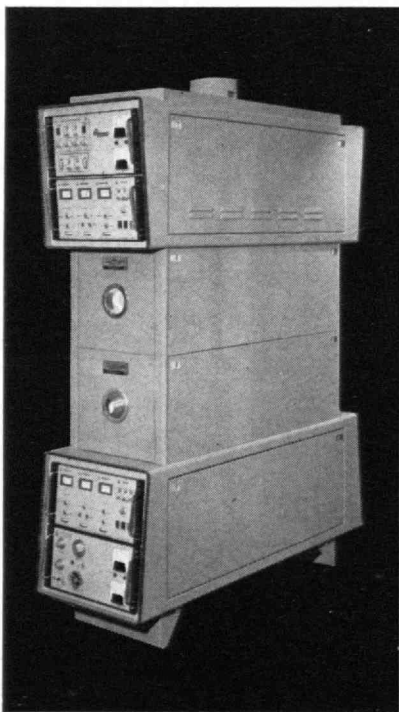
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show a persistent mosaic of patterns, even though all the gene-derived information is identical in all cells and in all parts of the cells. Thus, the same gene products assemble themselves differently according to the different surface patterns into which they are forced to fit.

The first session of the International Symposium on the Life Sciences at M.I.T. was planned in order to provide an authoritative and up-to-date presentation of the current status of the major problems of molecular biology and its relation to the functional organization of the cell. The three speakers, Drs. Francis H. C. Crick, Daniel E. Koshland, and Tracy M. Sonneborn, are not only among the most effective contributors to progress in these areas of research, but are also extremely articulate interpreters of biological thought.

The Two Sides of Crisis

(Concluded from page 26)

A second aspect of "crisis" is "opportunity." We find that the biologists have made tremendous strides in research involving the mechanisms which control development of the mammalian ovum, with the resultant approach to population control via oral contraceptives. This is one possible answer to the urgent danger facing man. Our knowledge of the physiological control of fertility has come about through the development of a fundamental knowledge of the reproduction cycles of man and offers potential as one effective means for control of population. In this, however, once again literacy and proper education are *à priori* requirements. Religious beliefs, too, can be extremely important.

The population equation also may be approached, at least for a limited period (the length or duration of which is highly debatable) by maximizing food output through increasing the amount of cultivated land, use of fertilizers, farming the sea, utilizing proteins of vegetable origin more effectively, and synthesizing proteins and amino acids by chemical and/or microbiological means.

The discovery by Mertz and co-workers of a mutant strain of corn, opaque-2, which is very rich in lysine, makes it possible to consider feeding large populations directly with vegetable protein which more nearly approximates animal protein in biological value, without the necessity of feeding animals first—a highly inefficient process. There is good reason to believe that analogous lysine-rich mutants of other cereals exist. Thus, we can foresee today the definite possibility of an approach to overcoming the animal protein shortage for some areas in the world without resorting to inefficient production of animal protein. Advances in genetics may make it possible to breed wheat for baking a loaf of bread with better staling characteristics, or breeding meat animals the flesh of which will have antitoxinants inherent in their protoplasm and thus less vulnerable to rancidity. These are examples of but some of the possible developments as progress in basic genetics continues and accelerates.



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FEEDBACK

Call to Reason

Sir:

I am most impressed by Hudson Hoagland's "The Pressure of Numbers" in your December issue. I think it is the most important article ever printed in The Review. And to reinforce its message, Gyorgy Kepes, in a facing article, talks of the "deformed and dishonest environment" into which we are born and which we all help to perpetuate.

I would like to suggest that M.I.T. look to doing much more to counter

emotional irrationality than publishing such well-written and well-reasoned articles. Such articles not only point out "our major disease," but also imply that not enough is being done to combat it. Shouldn't M.I.T., as a font of reason, lead the way in applying reason to fight the dangerous and blind religious and patriotic prejudices of which Hoagland talks?

But how to go about it is a tough problem. Our American learning institutions associated with big business

and big defense take great risks if they espouse causes which are seemingly antireligious (therefore tainted with communism) and seemingly unpatriotic. Perhaps the top people at M.I.T. are as deeply concerned as Dr. Hoagland and I am about the future. Perhaps they will conceive of some course of action, stronger than the present ones incidental to the teaching and practice of technology, which will reinforce concern for man and block the "... prejudices ... propagated from generation to generation by parental and adult authority and by the use of myths and symbols."

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INDIVIDUALS NOTEWORTHY

(Concluded from page 36)

H. W. Shimer: 1872-1965

An M.I.T. professor emeritus of paleontology, Hervey Woodburn Shimer, died December 13. He was a distinguished teacher and a leading authority on fossils, and a writer with broad interests.

Dr. Shimer earned his degrees at Lafayette College and Columbia University and came to M.I.T. as an instructor in 1903. Gettysburg College conferred an honorary degree on him in 1916. He became a full professor at M.I.T. in 1922 and served as acting head of the Department of Geology from 1933 to 1934. He was co-author with Professor Robert R. Shrock of *Index Fossils of North America*, and wrote for both professional and lay publications on evolution and natural history.

He was a former librarian and a Fellow of the American Academy of Arts and Sciences and a Fellow of the American Association for the Advancement of Science. He was a member of the Geological Society of America, the Boston Society of Natural History, the Washington Academy of Sciences, the American Anthropological Association, the American Forestry Association, the American Association of University Professors, the Association of Ph.D.'s of Columbia University, and the Twentieth Century Club.

Surviving are a son, John Asa Shimer, '39, Professor of Geology at Brooklyn College; a daughter who teaches at Wheaton College, and a grandson.

Honored Professors

Professor Emeritus Warren Kendall Lewis, '05, was one of 11 scientists and engineers chosen to receive the National Medal of Science this month from the President of the United States. . . . Professor Harold E. Edgerton, '27, was the 1965 recipient of the Morris E. Leeds Award from the Institute of Electrical and Electronic Engineers.

Professor Irwin W. Sizer, a trustee of Rutgers University, will represent M.I.T. at the 200th anniversary of that institution next September.

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(Concluded from page 34)

In The Review Office

Volta W. Torrey, Editor of The Technology Review for the last seven years, has resigned this position to accept appointment as Publications Manager of the Technology Utilization Division of the National Aeronautics and Space Administration. He had been serving NASA as a consultant since last summer and began full-time duties in Washington on January 1. With Mr. Torrey's departure, Managing Editor William T. Struble has been named Acting Editor.

An editor of wide experience on many of the nation's major newspapers and magazines, Mr. Torrey has been known to The Review's contributors and readers as an incisive exponent of clear language, and during his tenure as The Review's 10th editor he built a university publication of timely news and opinion. The Review was honored in 1961 and in 1964 by the American Alumni Council for the quality of its feature articles and for contributions to continuing alumni education.

Mr. Torrey came to M.I.T. in 1956 and for three years was M.I.T.'s Director of Television, a post in which he was seen by Boston Area Alumni as host on the Institute's "Science Reporter" program. Within the Institute, he has often been sought out by Faculty members for counsel on editorial projects and he also taught Summer Session classes in technical writing.

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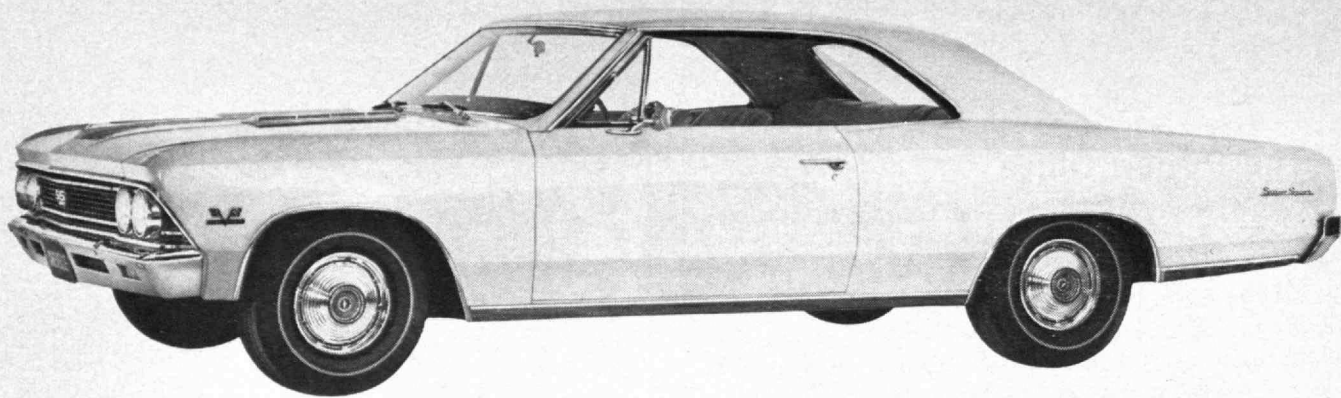
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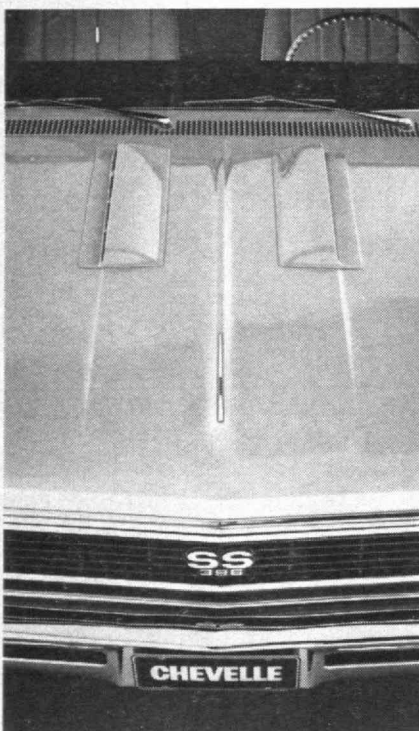
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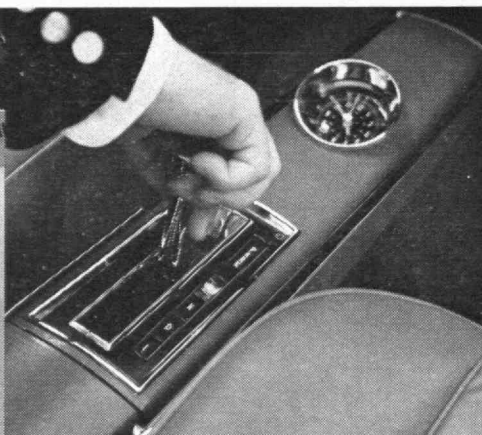


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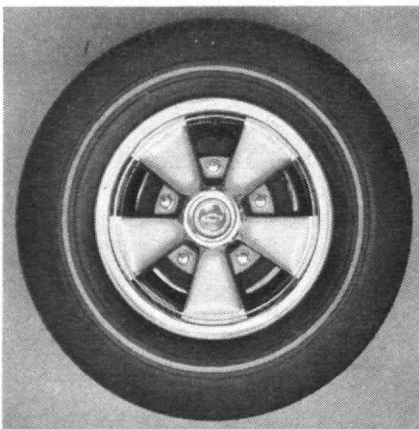
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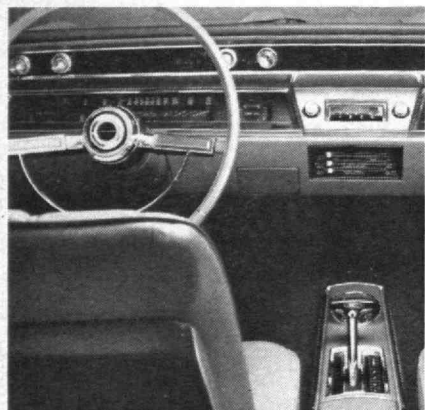
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Class News



'95

It was a pleasure to hear from our classmates, Professor Emeritus **Charles W. Berry** of Lexington, Mass., and **Robert D. Farquhar**, 2930 Avalon Ave., Berkeley, Calif., and to know that, weather permitting, both are able to enjoy outdoor life. —**Andrew D. Fuller**, Secretary, 1284 Beacon St., Brookline, Mass. 02146

'96

At Kresge Auditorium, where exercises were held on Friday, December 3, 1965, at 3:00 P.M., dedicating the Uncas A. and Helen F. Whitaker Building for the Center for Life Sciences; '96 was represented by the Secretary. When we were students, two well-known professors were Sedgwick in Biology and Prescott in Bacteriology of Foods and it is their research and teaching that escalated to the Center for Life Sciences and the new building named for the donors. There was a young lady seated on a bench in the lobby of Kresge Auditorium wearing an identification card, which she told me was concerned with a chemistry seminar held in connection with the dedication. She asked me if I were a Tech man and to my reply, "Secretary of '96," she said, "My father was in your class; his name was Charles W. Tucker." "Andover and Apples?" I asked, and she said she lived in Andover and that the Tucker family had received seven degrees from M.I.T. and that she remembered Rockwell, Lythgoe and Laws visiting at the Andover home.

Myron E. Pierce, Course I, of Bancroft Road, Wellesley, Mass., is the new Assistant Secretary and Treasurer of our Class. He left for Florida, where he has spent the winter for several years.—**James M. Driscoll**, Secretary, 129 Walnut Street, Brookline, Mass.; **Myron E. Pierce**, Assistant Secretary, 9 Bancroft Road, Wellesley, Mass.

'97

Communications from '97 men have not needed a computer for the past month, but there has come from the Alumni Office "news" that is 42 years old, that I live at 70 Flower St., Hastings-on-Hudson, N.Y.; apparently the computer is operating backwards.

On the death of John Collins, our class Secretary, perhaps 10 years ago, **Jack Ilsley** took over the job and papers

and title "Secretary pro tem." He was elected at Dedham in 1957, our 60th reunion; 13 members of the class were present. Just after a year or so Jack Ilsley took over the job with Class records and found that "Gus" Lamb had been made Assistant Secretary many years ago. "Gus" only lived a year or so after taking over Secretaryship and left his wife with little or nothing except a house at Amherst and Social Security. A group of us made up a fund of about \$4000 to be doled out monthly to Mrs. Lamb by the Alumni Office, and it has about run out. It has now been found that '97 has a "Class Fund" of about \$315.00, the origin of which I do not know, nor has its final disposition been established. It has been in the past used for flowers for prominent funerals.

I now propose, to which the Alumni Association agrees, that the \$315 be added to the "Lamb Fund." This will continue contribution to Mrs. Lamb for several months. After this her several stepsons must carry on. As self-appointed "Acting Secretary" I have no authority in the matter. Unless the living members of '97 disagree the "Class of '97" fund will be eliminated in this way. May I hear from you?—**George R. Wadleigh**, Acting Secretary, 70 Flower St., Hastings-on-Hudson, N.Y.

'99

Miles Standish Sherrill was born in Louisville, Ky., August 2, 1877, and died in Cambridge, Mass., November 19, 1965. He attended Phillips Andover Academy and was an active officer of its Alumni Association. He served on many committees and as Secretary for the class of 1899 at M.I.T. and was our class representative in the Alumni Council for many years. Miles received a Ph.D. in physical Chemistry from the University of Breslau in 1903. He became Professor at M.I.T. in 1924. He collaborated with Dr. Alfred A. Noyes in the development of a course in physical chemistry and a book "A Study in Chemistry Principles" published in 1921, revised in 1938 and still in active use in American and European laboratories. During World War I he was a Research Chemist for the Ordnance Department of the Army at the Nixon Nitration Works in New Jersey, supervising the catalytic process for the manufacture of picric acid. Miles went on leave several times to teach and do research work at the University of California, California Institute of Technology and Harvard University. He retired from the faculty of M.I.T. as Professor Emeritus

Happy Birthday

In February one alumnus will celebrate his 95th birthday and one will become 90; four will reach 85; nine will mark their 80th birthdays.

February, 1871—**EDWARD M. HUNT**, '94, on the 20th.

February, 1876—**FREDERICK C. GILBERT**, '98, on the 18th.

February, 1881—**GEORGE E. LOCKE**, '02, on the 1st; **LOUIS B. RAPP**, '03, and **ARTHUR E. SPENCER**, '05, on the 3rd; and **MISS HATTIE D. F. HAUB**, '12, on the 22nd.

February, 1886—**JOHN M. LEDDY**, '12, on the 2nd; **EVERETT R. COWEN**, '07, on the 5th; **GEORGE E. FREETHY**, '08, on the 6th; **HIRAM E. BEEBE**, '10, and **PHILIPS N. SWETT**, '07, on the 7th; **JOHN M. FRANK**, '07, and **KENNETH F. TRIMMINGHAM**, '09, on the 13th; **FRANK W. WILLEY**, '08, on the 15th; **EDMUND B. KIELY**, '10, on the 17th.

in 1944 but continued teaching until 1948. Dr. Sherrill was a Fellow of the American Academy of the Arts and Sciences and the American Association for the Advancement of Sciences and a member of the American Chemical Society, The American Society of University Professors, Sigma Xi, Alpha Chi Sigma, and the M.I.T. Council. He was a subscriber to the concerts of the Boston Symphony Orchestra and the Theater Guild. In 1963 he went to Europe. He wrote, "The high spot of the trip was a view of the pyramids at midnight by moonlight." He leaves a brother, Everett A. Sherrill of Brookline, Mass. and several nephews and nieces. A memorial service was held in the M.I.T. Chapel on November 24, 1965. Miles cordial greeting and prompt offer of helpfulness will be long remembered by thousands of students and associates. —**Percy W. Witherell**, Secretary, 1162 West St., Wrentham, Mass.

'01

There will be no Class Letter this year. I find that the work does not pay and is not now necessary. There is about \$300 in the treasury and the class expenses are very small. I feel that I can give you all the necessary information in the Class Notes and save money. I hope that you will give me all the information that you can dig up. I will make the Class Notes as complete as possible.

I noticed in the Boston paper of December 2 the death of **Ed Brigham** who was plant engineer for the New England Confectionary Company for many years. We shall miss him.

I also received from the Alumni Office a notice of the death of **Joseph A. Gund**, I, of Freeport, Ill., on May 2, 1962. I have no other information about him.

As far as I know Mrs. Peterson is still in the hospital.—**Theodore H. Taft**, Secretary, P.O. Box 124, Jaffrey, N.H. 03452

Your Secretary recently fulfilled a long desired visit to **Bob King, III**, and family at Norwalk, Conn., while on my way to my son Paul's home in Oakland, Calif., for the Thanksgiving holiday. During our cordial meeting, we discussed much class news and aroused great surprise and enjoyment for Mrs. King on display of a colored photo taken at our last Commencement Luncheon. This photo was intended for display in a later Review but brought disappointment as it is required to be black and white copy for publication. However I hope to overcome this "faux-fuyant" on coming Commencement next June.

My next visit was at the new, attractive offices of the M.I.T. Alumni in New York. Here I was cordially received and officers gratefully accepted a large photo of the Rogers Building and a photo of our 60th Reunion banquet for display in their Reception Room.

The campus of M.I.T. adds another outstanding building to its varied complex structures in an eight-story, \$5,800,000 building for teaching and research in the Life Sciences. Known as the Uncas A. and Helen F. Whitaker Center, to blend with the eight-story John Thompson Dorrance Building on the East campus. The Whitaker Building provides 134,000 gross square feet of additional space for faculty, student and staff of the Department of Biology and Department of Nutrition and Food Sciences. Mr. Whitaker, graduate of M.I.T., 1923, is Chairman of the Board of Directors, A.M.R. Incorporated, a leading electrical and electronics firm, and a member of the M.I.T. Corporation, the Institute's governing body.

In accordance with my pleas for classmates' autobiographies, our energetic "Scotty" Morse, I, has set the pace for other hesitating classmates to follow suit at last. His keen interest in all class matters recalls that he was Editor-in-Chief of the Technique in memorable days of yore. His staff of Associate Editors was George D. Wilson, I, and George B. Wood, II, still active at Rockland, Maine. Athletic Editor, Henry G. Winchester, VI, is now deceased. Statisticians were Lawrence H. Lee, VI, now at Tacoma, Wash., and Hewitt Crosby, XIV, still active at Sarasota, Fla. Following is the complete report of Howard Morse: "The summer after graduation I worked for the Pennsylvania Railroad as instrument man on double-tracking and maintenance of way on the Erie and Ashtabula Division, with headquarters at New Castle, Pa., for \$50 per month. These were the days when railroads were at their peak and I found the work fascinating. By prior arrangement I returned to M.I.T. as assistant to surveying in the Civil Engineering Department. By the end of one year I concluded I did not care to continue teaching as a career and entered the service of the U.S. Reclamation Service (created by the Act of Congress in 1902, when Theodore Roosevelt was President of the United States and James Rudolph Garfield was Secretary of the Interior, under which de-

partment the Reclamation Service functioned.)

"I was assigned to the Lower Yellowstone Irrigation Project in Eastern Montana, where I served as assistant engineer from 1904 to 1909. My work on the Second Division of this Project being finished, I tried to resign, rather than accept a transfer to another Project and return to what we call 'civilization,' although I had enjoyed the outdoor life on the plains. My resignation was not accepted because I was told I didn't know what was going on in our country. It seems we were in the midst of the 1907-08 'Panic,' (now termed 'Depression'). So I was given a leave of absence and as far as I am aware, am still on leave without pay.

"I next turned up at Louisville, Ky., as resident engineer in construction of a sewerage system for that city. It was in Louisville that I met my future wife, Mary Shreve Polk, a 'Damned Yankee' marrying a 'Daughter of the Confederacy.' This combination worked perfectly as we produced a son and daughter and I now have five grandchildren, all living in Indianapolis. Mary passed on in 1957.

"When first married we lived in Cincinnati, where I was principal assistant city engineer in charge of sewerage construction. This job included the making of a topographic map of Hamilton County, in which Cincinnati is located. I next became director of the Cincinnati Bureau of Municipal Research, then engineer for the Detroit Bureau of Government Research. I returned to Ohio in 1918 as Director of Public Service in Akron. We lived there seven years. My son, Daniel, was born in Cincinnati and daughter Mary Scott in Akron.

"I came to Indianapolis in 1925 as general manager of the Indianapolis Water Company, a privately owned and regulated public utility serving Indianapolis and vicinity. I finally retired as Chairman of the Board of that Company in 1960, and am no longer 'active' as I understand the term. I have never loafed and even now am a member of the Mayor's Advisory Committee on Flood Control. My son Daniel Polk Morse is now president of the Indianapolis Water Company. The prime accomplishments of the Indianapolis Water Company during my regime were (1) the placing of all our customers on a metered basis (this took period 1925-32), and New York City has not accomplished this yet; (2) fluoridation of our supply (starting in 1957); (3) constructing two large storage reservoirs, the first completed in 1943 and the second in 1956—consequently we have never experienced any water shortage.

"Incidentally, back in the winter of 1906, when I was working in Montana, I had a five-week vacation westbound, i.e., to Seattle, Portland, Reno, San Francisco just after the earthquake and fire, Los Angeles and Yuma, Ariz., before it became a state (in 1912). At present I am a member of various organizations in Indianapolis, among them 'Rotary' of which my son was president last year. I am an 'Honorary Member' of the American Water Works Association and also 'Honorary Member' of the American Society of Civil Engineers."

Our birthday greetings for their 85th milestone go to **J. Tyrrell Cheney, II**, June 26, 1880, of Wilton, Conn.; **Louis W. Graves, II**, July 24, 1880, of Buffalo, N.Y.; **James W. Welsh, VI**, October 20, 1880, of Winter Park, Fla.; **J. Russell Jones, III**, November 15, 1880, of Randolph, Va.; **Roger D. Babson, III**, October 7, 1880 of East Longmeadow, Mass.; **Miss Alice F. Blood, V**, November 25, 1880, of New Hampton, N.H.; **William M. Gilker, VI**, December 13, 1880, of Dallas, Texas; **Stanley A. Foster, X**, December 29, 1880, of Lowell, Mass.; and **Howard T. Graber, V**, also December 29, 1880, of Los Angeles, Calif.

There are 77 members now living in the 1903 class.—**John J. A. Nolan**, Secretary, 13 Linden Avenue, Somerville, Mass.; **Augustus H. Eustis**, Treasurer, 131 State Street, Boston, Mass.

'04

[Since these notes went to press, word has been received of the death of the Class Secretary, **Carle R. Hayward**, on December 26, 1965. See obituary on page 8—Ed.]

A letter has been received from **Frank Davis** of Detroit. He says he gets into his office nearly every day even though struggling with arthritis in his left leg which does prevent traveling about much. He drives enough to get Mrs. Davis about locally. Frank says he read in the Grosse Pointe News of the death of **Edgar Barly Cooper** on October 31. He started in our class and gained a five year degree in 1905. He was active in M.I.T. affairs for many years in the Detroit area and was president of the Cooper Construction Company and General Contractors Association.

Two other deaths are reported by the Alumni office with no details available. **Howard L. Pierce**, Course I, on August 16, 1964, and **Bertram A. Richardson**, Course IV, on June 10, 1965. . . . We have one change of address, **John W. Ager**, 145 Camillia Circle, Birmingham, Ala.—**Eugene H. Russell, Jr.**, 82 Stevens Rd., Needham 92, Mass.

'05

I had not been able to get a rise out of **Percy Goodale, VI**, for some time, so a message and newspaper clipping from **Bill Ball** breaks the ice. The clipping tells me of an auction of Percy's many antiques, heirlooms and art objects was held at his home in Falmouth (Cape Cod) recently (around the latter part of November) and an accompanying bit of information, which perhaps explains this. Percy is a patient in the Royal Megansett Nursing Home in North Falmouth. Perhaps before next issue I can tell you whether you should send a cheer-up card. Bill also tells of an accident to Peg—a fall which resulted in cracked ribs and possible damage to "dorsal vertebrae." It must be tough for Peg to be idled. But apparently

Bill and Peg (probably in a brace or harness) are doing another Good Samaritan trick—helping a friend keep his shop open, selling cigars, candy, souvenirs. What an opportunity, presupposing their tobacco and gastronomical appetites are good.

I am privileged to receive a copy of Ted and Edith Steel's, VI, Christmas Family letter. I learned that they celebrated their Golden Wedding Anniversary last June; that they have four grandchildren; that Ted's eyesight is almost nil, but that he reads widely with his "talking books." They seem very philosophical about these things, but state that they are enjoying the love of their older as well as their newer friends whom they have found in their fellowship of the Quaker Meeting, "which we joined when we moved here three weeks ago."

A Christmas Card from Charlie and Isabel Smart, II, tells me that they are starting on a South America trip, visiting friends in British Guinea, thence to Jamaica and Florida. In spite of several attempts I have been unable to add to the notice of Ted Moorehead's death. Bob Beard, I, tried but could find no obituary in the Oakland Tribune. I'll keep trying. Incidentally Bob announces that he has had another article accepted for publication in the Fibonacci Quarterly. Subject Star Geometry—Pythagoras, Fibonacci and Beard.

I report regretfully the death of Wallace N. MacBriar, II, on November 7, 1965. He and Ruth were with us at the 60th Reunion and Wallace seemed in good health and spirits. Ruth writes me that a nerve impairment in the neck gradually paralyzed the muscles above and that he was relieved without too much suffering. I may have more news before another issue.

Change of address: Edward J. Poor, VI, 709 Idlewyld Drive, Fort Lauderdale, Fla. 33301.—Fred W. Goldthwait, Secretary, Box 32, Center Sandwich, New Hampshire.

'06

It may seem like ancient history in February but in the middle of December Christmas cards are day to day events and Marion and I are grateful for your kind thoughts and messages. Come June we will be celebrating our 60th, but last October 27 a Boston group observed its Diamond Jubilee. It was the Boston College Club and at that jubilee dinner, to quote the Boston Traveler, "Women of distinction, ladies representing outstanding achievement in their fields, have star billing in the College Club of Boston's Diamond Jubilee Dinner tonight." The speaker was Mrs. Barbara Solomon, Dean and Director of Women's Archives at Radcliffe College. Her subject was "Distinguished Women and Their Activities," and they included Mrs. Leslie Cutler, a long-time member of the Mass. Senate; Mrs. Hazel Wightman, America's first lady of tennis; Mrs. Ethel Johnson who has distinguished herself in the Mass.

Department of Labor; Dr. Margaret Kleinert, one of the first graduates of the Woman's Medical College of Pa.; and Emma Schofield, long-time Boston court judge. As you would expect, they also included in that group of Distinguished Women, Mrs. Johnson O'Connor representing the architectural field. "A graduate of M.I.T. in the early 1900s, the former Eleanor Manning headed the first women's architectural firm in Boston—Manning, Howe and Almy. She is also a former president of the College Club."

The Review's editorial staff not only sent us season's greetings but "takes pleasure this year in sending you a Christmas present as a token of its gratitude for your helpfulness as a class secretary." That present was A Dictionary of Modern English Usage (Library of Congress CC No. 65-24351) and it's some book—725 pages of small type and over seven pages of Preface! Most of the preface is about the life of the English author, H. W. Fowler. I hope to peruse said dictionary, at intervals, and in time you may detect a distinct improvement in these notes.

... Some of you fellows will experience a sudden mouth watering when you recall those days of "beer and skittles" at Jackie Wirth's! Jacob Wirth, 86, son of the first Jacob Wirth, died in December. That restaurant "has been famous for 97 years for its food and dark beer, the absence of ladies at the bar, and sawdust on the floor." I'd like to quote the whole of the Herald obituary—really a fine commercial for that famous restaurant on Stuart Street—but will settle for one paragraph. "The quality of the German cooking helped keep the customers coming in, even during Prohibition, when many such places were forced to close. Wirth's was one of the last places in Boston to take down the signs that forbade women to smoke." Did YOU ever SEE a woman in Jackie's?

Deceased

CHESTER F. DRAKE, '98
MILES S. SHERRILL, '99, November 19*
EDMOND F. BRIGHAM, '01, November 30*
ALFRED L. COUPE, '04, July 11
CARLE R. HAYWARD, '04, December 26
FREDERICK L. W. RICHARDSON, '04, June 19
EDGAR B. COOPER, '05, November 1
WALLACE N. MACBRIAR, '05, November 7*
ANDREW L. BELL, '06, September 21*
WILLIAM J. WALSH, '06, October 12*
WALTER B. SMALL, '07, April 21, 1964*
GEORGE S. COLEMAN, '08, December 8
THOMAS G. CHAPMAN, '09, November 6*
ROBERT M. KEENEY, '09, November 18
RAYMOND B. TEMPLE, '09, June 27
GORDON G. HOLBROOK, '10, December 6
SAMUEL M. SCHMIDT, '11, October 31*
CHARLES E. DODGE, '12, November 1
CARL LINDEMANN, '12, April 19
RALPH F. SYMONDS, '12, November 27*
JOHN W. S. BRADY, '13, October 31
MAYO TOLMAN, '13, November 29
DONALD H. VAN DEUSEN, '13, April 9
OLIVER C. HALL, '14, December 3*
FRANK J. JEROME, '14, November 23
DAVID M. TERWILLIGER, '14, December 16
WILLIAM E. ASH, '15, November 18, 1964

Several reports have come from the Alumni Office recently with zip numbers added to the address—do you show your zip number on all your mail? One such report was from architect John Timothy Wrinkle, now enjoying life in Mill River, a small town in the lovely Berkshire country in southwestern Mass. John's professional career was mostly in Springfield and Holyoke. . . . From the Alumni Office came reports of three deaths. Frank Flinn Hasbrouck, V, died January 12, 1963. He had received his A.B. and A.M. from Wabash College, founded in 1832 in Crawfordsville, Ind., and was with our class for two years as a graduate student, when his home address was Peoria, Ill. The earliest information about his activities that I have is from 1915 when he was chief chemist and superintendent at Hirsch Brothers, a food products company in Louisville, Ky. Then no more information until 1935 when he was with Allied Mills in Peoria, and his address has continued to be in Peoria. No further details are available. . . . The death of Andrew Lane Bell, XIII, S.B., on Sept. 21, 1965, was reported by his wife, to whom a note of sympathy is being sent. Andrew was born October 25, 1885, in Plymouth, N.H. He prepared at U.S. Naval Academy; was a member of the Naval Arch. Society; his thesis was a test, with R. J. Lyons, of ten Manning boilers. For a year or so after graduating he was a draftsman with the Motive Power and Machinery Department, Isthmian Canal Comm. at Culebra, C.Z. After a short hitch with the Bolivia Railway Company at LaPaz as mechanical engineer and then traveling in South America and England, he rejoined the Canal Comm. for a longer stretch, at Balboa. In 1917 his address was Washington, D.C., during the time in WWI when he was assistant general purchasing agent, U.S. Shipping Board, Emergency Fleet Corporation and in 1918

ELBRIDGE J. CASSELMAN, '15, October 30*
PAOLO DE VECCHI, JR., '15, November 3
HERBERT G. BURK, '17, October*
STANLEY K. COOPER, '17, February 15, 1965*
RAYMOND W. DROBISCH, '17, August 1*
SIMPSON R. STRIBLING, '17, November 30*
FRANK H. COPELAND, '18, October 10*
AUSTIN J. O'CONNOR, '19, December 25
MAURICE H. ROLE, '19, January 26, 1965
ZAMBRY P. GIDDENS, '21, November 12*
ALLEN R. DIEFENDORF, JR., '22, August 15, 1964
JOHN C. MOYNIHAN, '22, October 24*
PAUL WINSOR, JR., '22, September 18
JOHN E. VEREKER, '23, May 1, 1964
GEORGE L. LINDSAY, '24, November 5*
H. GREGORY SHEA, '24, November 13
MALCOLM G. DAVIS, '25, September 30
SHIH-MIN CHU, '26, October 26
JOHN A. WALQUIST, '26, July 27
HARRY L. WEINSTEIN, '26, October 21
LOYST C. CAVERLEY, '27, June 30, 1964*
ERIC HARTMANN, '28, November 4*
ERWIN T. PARKHURST, '31, November 27
JOHN H. KELLETT, '32, November 22
EDWARD E. FOSTER, '33, November 27
DICKY CHAPPELLE, '40, November 3*
*Further information in Class News

was in Philadelphia for that Board. In 1919 his address was St. Louis and in 1922 it was Swarthmore, Pa. By 1925 and for 10 years or so, he was manager of the Barber Asphalt Company in Buffalo and then for eight or 10 years was plant engineer with the Barrett Company at Edgewater N.J. By or before 1947 Andy had become principal designing engineer with Solvay Process Company at Hopewell, Va. By early '55 he had retired to his birthplace, Plymouth, N.H., and later moved to Hoosick Falls, N.Y. In spite of his frequent moves, Andrew kept the class secretary informed—his file card is full of entries—and at intervals, from 1916, paid class dues for nearly 50 years, as well as contributing to the Alumni Fund. Lacking time to check, I cannot tell whether he ever attended our reunions but I would consider Andrew Bell an outstanding example of a loyal classmate and Tech man, as well as a success in his professional career. In 1916 he married Elizabeth R. Baker but we have no information about his family, memberships, etc.

Notice of another death came through an obituary in the Philadelphia Inquirer. **William James Walsh, X, S.B.** died October 12, 1965, while visiting a daughter in Jenkintown, Pa. He was born May 1, 1885, in Roxbury—long since a part of Boston—prepared at English High; was a member of the M.E. Society and his thesis was—a Method for the Removal of Sulphuric Acid from the Gas evolved in Charging Storage Batteries. Bill lived at home during our four years and spent his first year out as an assistant in heat measurements, then for 15 years or more was plant superintendent of F. R. Plumb Company in Philadelphia, which during WWI made tools and side arms for the U.S. Government and Emergency Fleet Corporation. Until he retired in 1955 he was factory manager at Delta File Works in Philadelphia, becoming Vice-president in charge of manufacturing. He was a member of ASME and the American Society of Metals. Surviving are the daughter, Mrs. Thomas G. Goldkamp; two sons; twelve grandchildren, and two great-grandchildren. A letter of sympathy is being sent to the daughter, for the family. You have probably already received, or soon will, the letter-questionnaire about our 60th reunion next June. Hope to see you then.—**Edward B. Rowe**, Secretary-Treasurer, 11 Cushing Road, Wellesley Hills, Mass. 02181

'07

An inquiry from the Alumni Register asks for information about the present address of **John P. Wetherill**. All my records show he lived at 1830 Rittenhouse Square, Philadelphia, Penn. the last time Bryant Nichols heard from him. Could anyone furnish me with his present address? . . . I have received a report from the Alumni Register indicating that **Walter B. Small**, died April 21, 1964. He resided at 67 Slater Ave., Providence, R.I. Again I have no information other than that he was in the banking business and

returned several years ago. Any news about him would be appreciated.

In the January Review I had a paragraph about "**ME**" **MacGregor's** mountain climbing activities this past summer. This fall, "Mac" was interviewed by a reporter for the Cape Codder and I quote from his column: "Milton MacGregor has long since passed the age which we associate with mountain climbing. I said, 'Do you mind if I ask you how old you are?' 'Not at all,' he replied, 'I was eighty-one last month' (Sept. 6). 'Frankly, I think that is really one for the books, climbing Mount Washington two weeks before one's eighty first birthday! Many of us could not do it at half that age. All hail to MacGregor, Man of the Mountains! He has in his veins the blood of his Highland ancestors. He is a true Scot! Long may he live to climb the peaks of New England!'"

In obtaining information to put on the **Herb Eisenhart** page in the '07 archives, I asked him what kept him from rusting out now that he was retired. His activities at present seem adequate to stop any possibility of rusting out. He serves as a Trustee of the Rochester Savings Bank and a Director of the Security Trust Company of Rochester. He is also a director in the following organizations; Rochester Gas and Electric Corporation, Rochester Telephone Corporation, Bausch & Lomb, Inc., and Taylor Instrument Company. He serves as a Trustee on the Board of the University of Rochester and also on the Rochester Institute of Technology. . . **Kirk W. Dyer, X**, has been active in the operation of the Pierson Greenhouses in Cromwell, Conn. This is one of the largest plant growing operations under glass in New England. Although Kirk has retired, he still is interested in the operation and has extended me an invitation to visit them, at which time he will be my guide. As we have a small operation in Whitinsville which I manage, I shall take advantage of this invitation and visit Kirk with our local greenhouse superintendent.

I had an interesting Christmas card from **Harry C. Lord, '08**, from St. Petersburg, Fla. It seems Harry entered M.I.T. with '07 and remained in the Class until Sophomore mid years. He was forced to give up his studies at that time due to illness but later returned and was graduated with '08. I quote from his card, "I have always considered my class as '08 but, actually, I guess I know more '07 men than '08 men and that's why I enjoy your column so much." If any of the men who recall Harry Lord would send him a card or note, I am sure he would appreciate hearing from you. His address is 1651 20th Ave., N., St. Petersburg, Fla. 33713.—**Philip B. Walker**, Secretary and Treasurer, 18 Summit St., Whitinsville, Mass.; **Gardner S. Gould**, Assistant Secretary, 409 Highland St., Newtonville, Mass.

'09

We have received the following from **Mayo Hersey**: "I was grieved to read of the death of **Francis Loud** (Class Notes,

July). I had not seen him recently but had been hoping to look him up. I knew his father, Professor Frank H. Loud, at Colorado College and later in Washington, D.C. My father and I were both students under Professor Loud, he around 1884 and I in 1906." We have also received the following release from Brown University: "Mayo D. Hersey, Visiting Professor of Engineering at Brown University, has been awarded the first Mayo D. Hersey Award by the Lubrication Division of the American Society of Mechanical Engineers (ASME). The award, established in Professor Mayo's name only this year, is to be awarded annually, if warranted, in recognition of 'outstanding and continued contributions to the field of lubrication science and engineering.' The citation accompanying the award, which was conferred at the ASME's winter annual meeting recently in Chicago, praised Professor Hersey 'for his pioneering and sustained contributions to lubrication science and engineering, for his far-sighted recognition of the multi-disciplinary aspects of lubrication problems, and for his continued encouragement of others through teaching, research, and professional activities.'

"Professor Hersey has been a visiting professor at Brown since his retirement in 1957 from the U.S. Naval Engineering Experiment Station at Annapolis, Md. A graduate of Colorado College (A.B.) and M.I.T. (B.S.), he holds the A.M. degree from Olivet College. Following graduate work at Harvard, where he began experimenting on lubricants under high pressure, he spent ten years as a physicist at the National Bureau of Standards and two years as an associate professor at M.I.T. He then became head of the Physical Laboratory of the U.S. Bureau of Mines in Pittsburgh, leaving that position in 1926 to spend five more years with the Bureau of Standards as chief of the Friction and Lubrication Section. For 16 years he served as engineer and consultant for both private and government industries and agencies, including the 'Manhattan Project,' before going to the Annapolis position. Professor Hersey has the distinction of being the first to apply dimensional analysis to lubrication and to measure the effect of pressure on viscosity lubricating oils." In earlier class notes we told of Mayo's career, which is described in the foregoing summary. The Class congratulates him on the establishment of the ASME award and because he is the first recipient.

We have received a note from Marion Temple in which she states: "Thank you for sending me the November issue of the Technology Review which contained the facts about Ray, and also your fine tribute to him. It is appreciated by our son and daughter, too, and they want me to tell you so. I enjoyed your account of Alumni Day and all of the news from the Class of 1909, although some of it necessarily had to be on the sad side."

We have received a letter from Frank Sharman, '08, enclosing a clipping from the Arizona Daily Star telling of the death at 79 years of age of **Dr. Thomas G. Chapman**, Dean Emeritus of the Arizona University School of Mines and Director

Emeritus of the Arizona Bureau of Mines. Dr. Chapman, Course III, joined the University of Arizona faculty in 1916 after earlier teaching experience at M.I.T. and the Michigan College of Mines. He received the bachelor and doctoral degrees at M.I.T. and the master's degree at Arizona. He was born in Nova Scotia, prepared for the Institute at Pueblo, Colo., and was a member of the Mining Engineering Society and class relay team. He was widely recognized as a metallurgist, was author of numerous publications, and earned many distinctions. University of Arizona President Richard Harvill said "Dr. Chapman's death marks the end of a remarkable career of a remarkable man. His contributions for fifty years as teacher and administrator at the University of Arizona and his services to the state of Arizona will continue to be felt and will grow for many years to come. In the records of the University of Arizona he will always be one of the most distinguished figures." He was a member of the American Institute of Mining, Metallurgical and Petroleum Engineers, Tau Beta Pi, Sigma Xi, Phi Kappa Phi, and Theta Tau. He is survived by his wife Dorothy and a son Thomas G. Chapman, Jr. We have written to Mrs. Chapman expressing the sympathy of the class as well as our own. Most of us did not realize that a member of the class had reached such distinction, not having received news of his career during past years.—**Chester L. Dawes**, Secretary, Pierce Hall, Harvard University, Cambridge 38, Mass.; **George E. Wallis**, Assistant Secretary, Wenham, Mass.

'10

Harold Lockett of Aldie, Va., writes, "Ever since yours of September 15 arrived I have been intending to thank you for it and the picture. That was a grand idea and I'm sure all the rest of the class agrees with me. It is a good thing that I wasn't there or the whole tone of the picture would have been lowered. Having only seen a very few of the fellows since graduation there were only two or three whom I could recognize. Starting about the 4th of March it seems as if the entire year so far has been spent in some hospital. Let us hope this time everything will stay tight. Maybe I'll be able to try golf again. Never was any good but haven't had sense enough to quit trying."

Herbert G. Reynolds writes: "I think you are justified in wishing we would all write more often. I wrote just two years ago and nothing much has happened since. One great-grandson has been added to the rolls making it 11 grandchildren and two great grandchildren. The two oldest of the grandchildren attend University of Southern Calif., both with scholarships. Both Mrs. R. and I manage to keep busy with church work and entertaining relatives from out of town and we manage to stay pretty healthy in spite of advancing years. We also have a grandson in the Navy who has been in the thick of

things at Vietnam. Don't hear from him too often but at last reports he was O.K."

Allen Gould writes, "I've had your free return envelope on my desk for several weeks and I grab this chance to use it before it bothers my conscience any longer. Thank you for your letter and the group picture. I was sorry not to be there in June but we had a household of nephews passing through from college, etc., and I had to stay on the job. Lima, Peru, is the official home of three of them but our place has become home for as long as they stay in this country getting educated. Things continue very much the same with me with no retirement yet though I take my time getting under way mornings. This summer was unusual in that we were away on the 'Mauretania' cruise in July and early August. Quite an unusual type of cruise visiting 10 of the Western European ports from Madeira and Lisbon to Oban and Dublin. A lazy way to tour with the stateroom to sleep in every night. Landed at Southampton and then had a week in London and Devon where Barbara looked up some of her ancestors' gravestones. Being on the cruise we had to skip our usual racing at Menter Harbor Yacht Club and have done little since our return as we both picked up a bug somewhere. Either that or old age made it pleasanter to take it easy. **Jack Tuttle** is the only classmate anywhere near Cleveland. I had lunch with him in Akron in the spring but at that time felt he would not be able to get to Cambridge. You sound as though you were bearing up very well and hope you are getting plenty of replies from classmates which you can pass on to us by way of the Technology Review. We didn't get in a visit to Boston this year but I will surely let you know when I do."

Harold Smith writes: "The letter of the 15th with class photograph and report from Jack Babcock was much appreciated. Thank you. As I wrote Jack, Mildred and I were sorry not to be present at the reunion but unexpected trips to New Hampshire in late May made it impossible."

Jay W. Cilley writes: "The picture of the class reunion is very much appreciated. I would have enjoyed being there but due to two heart attacks I have been limited in my activities the past two years. As of now, I am in quite good health and I am enjoying life as much as my restrictions allow." . . . **Frank H. Hill** writes: "Thank you for your interesting report regarding the 1965 class reunion, and the very nice photo of the membership attending."

M. F. Tiernan writes: "There isn't much for me to report except that I am still alive. I retired from business activity in 1958. I still hold an honorary Chairman title of the Board of Wallace and Tiernan. My health is not good mainly due to old age problems. If I could get a new pair of legs I'd no doubt be at reunions. Mentally I am fine. I sleep well, eat well and enjoy my visits with my five children, their wives and 24 grandchildren. I spend my days being read to, watching T.V. particularly sports and news programs and enjoy visits with friends and family. Because of my inability to walk I have three nurses all the time. One of the outstanding things

that has happened to me in my lifetime was the awarding of an honorary doctorate from Seton Hall University. In 1963 Wallace & Tiernan, the company which Mr. C. W. Wallace and I founded, celebrated its 50th anniversary. It was a satisfaction to me personally to see the growth of the company and to know of its future prospects. In brief I might say I am in retirement enjoying the fruits of my labors for so many years and getting real enjoyment sitting back and watching the growth and change in the Company which I helped to establish. I have published my *Memoirs*. It is available upon request."

Henry C. Perley writes: "I was pleasantly surprised to receive your letter and class picture with the report of the 55th reunion of the class of 1910. Two years ago when you requested information for class notes in the Review I was recovering from a siege with shingles. I still have a reminder of the disorder which the doctor told me is caused by damaged nerves. Otherwise I am fairly active and spend most of my time working around my home." . . . **Gordon Hawes** writes: "I know of no classmates here about and no news of myself worth printing. Life at my age is of very little interest to anyone."

. . . **Kenneth P. Armstrong** writes: "I appreciate very much the photograph you sent us of our classmates and their wives who attended our 55th reunion last June, and the copy of Jack Babcock's report. Though I did not make up my mind to attend until the last minute, I am glad I did so. It was nice to meet these old friends again, and to get to the alumni doings. The day after Alumni Day I flew to Washington and visited with my younger son and his family until after the 4th of July holidays. I then flew back home to Miami. While I was in Washington I discovered that I had developed a case of unstable equilibrium. It had probably been coming on for some time but in this level South Florida country I had not noticed it. My son's house, however, is situated on a terrace with some ten steps from the sidewalk to his front entrance, and no hand rail. I could not make it either up or down without assistance. When I got back home I went to the medical clinic here and was told that this condition was due to insufficient blood supply to my inner ear balance mechanism. Some pills and capsules were prescribed, which I am duly taking as directed. They appear to control but not cure it. All my descendants are still alive. My son in Washington, an older son in Florida, three grandchildren in Washington and four in Florida, four great-grandchildren in Florida, with a fifth on the way."

Cecil Blanchard writes: "Thank you for your letter of September 15, Jack Babcock's report and the photo of the reunion. Even though I cannot remember one of those present, it was good to look at and study. As I wrote you once I had little contact with 1910, as I lived at home in Quincy the one year I did extra work at M.I.T. and my associates were '09 men. It is nice to be remembered by '10 men however. If I lived nearer, no doubt I would know many of you by this time." . . . **Mrs. Martin Tod** writes: "Thank you for the report of the reunion. Most of you

look hale and hearty enough to be around for the 60th. We enjoyed the 45th reunion but have never been able to make it since. Our traveling days are over and our good home is the best place for us. Martin's eyes are so dim now that writing a letter is a great chore. He sends greetings."

H. Norris Harrison writes: "Thanks for your letter and photograph. The only man I recognized was Frank Bell. I am retired, cannot get around much but still happy with three sons, eight grandchildren and a wonderful wife and a nice home."—**Herbert S. Cleverdon**, Secretary, 120 Tremont St., Boston, Mass.

'11

Samuel M. Schmidt collapsed and died at a dinner feting him at the Jewish Community Center, Roxlawn, Ohio. His daughter, Mrs. Blessing Sivitz, sent me a clipping from the November 1 Cincinnati Enquirer from which the following is taken. "Mr. Schmidt, 83, stood up to accept the Jewish National Fund plaque from Judge Gilbert Bettman. He began gasping for breath. The emotion is too strong," he said to the audience of more than 500 stunned persons. Then he fell over, unconscious. Efforts by the Life Squad failed to revive him and he was pronounced dead on arrival at Jewish Hospital. The Jewish National Fund was honoring him by planting 10,000 trees in his name in the Ohio section of the John F. Kennedy Peace Forest in Israel . . . Mr. Schmidt was founder and publisher of the newspaper 'Every Friday' which appeared every Friday from 1927 to Aug. 1965 . . . Mr. Schmidt emigrated from Lithuania in 1896 . . . From 1915 to 1917 he was engaged in social work in Boston and Cincinnati, and during World War I took an active part in overseas relief projects . . . During recent years Mr. Schmidt had an active role in development of the new Orthodox Jewish Home for the Aged, and founding the Cincinnati Hebrew Day School . . . Mr. Schmidt is survived by three sisters, four daughters and 15 grandchildren."

The following is from **Marshall E. Comstock**. "My wife and I have re-built our summer home at Pleasant Point, Knox County, Maine, which was destroyed by fire a year ago last August. We plan to spend around five months each year, and I can keep busy with garden, lawn, wood for the fireplace and errands in town. We would be glad to see any eleveners there, and we'll give directions for getting to our place if you'll write us at Pleasant Point."

By the time you read this you will have received an announcement from **Morris Omanski** about the 55-Year Reunion next June. I do not intend to let you forget about it, but make your plans now. Of course we are all going to live for many years, but don't pass up this opportunity to see your old friends. . . . As this is being written (mid December) the Class Alumni Fund Agent, **O. W. Stewart**, is in the Jordan Hospital in Plymouth for a major operation. Nothing you could do

would make him any happier than a contribution to the Alumni Fund. "Write to Obie."—**Oberlin S. Clark**, 50 Leonard Rd., North Weymouth, Mass. 02191.

'12

Priscilla and Jay Pratt celebrated their 50th wedding anniversary with a reception at the 19th Century Women's Club in Chicago, with their children and grandchildren. As you know Jay was a native of Bridgewater and Priscilla came from Fairhaven. Jay retired in 1950 as Vice-president of the Liquid Carbonic Company. Priscilla has always been active in Girl Scouts, and was elected in 1951 as a member in the World's Association of Girl Guides and Girl Scouts. This office has taken them to many parts of the world. Jay has practically recovered from the laryngectomy operation of last April. His only difficulty is with speech, which is improving all the time. . . . In New York last fall, at a Girl Scout meeting, they met Mrs. **Cy Springall** who has also been a scout for many years. Cy is reported as being in fine shape having recovered from his illness. The Pratts expect to go to Mexico again this winter as they have done for many years past. . . . **Johnnie Noyes** reported that during the summer they had many fine visits with the Springalls, who summer in Dexter, Maine, which is quite near the Noyes' summer home in Brooklin. On the way East the Noyes visited **Bill Salisbury** who has a summer home on "Point of View" on Hungry Jack Lake which Johnnie calls a city slicker cabin set in the wilderness. The Noyes visited **Don Radford** who is retired from the mill and lumber business which his son is now operating. The Noyes spent Thanksgiving at Bryan, Texas, with most of their six children and 12 grandchildren.

I met **John Raymond** in Park Square as he came from his office the other day and learned of his wife's death last spring. . . . **Ralph Symonds** passed away in November at Marblehead after a long illness. . . . **Charles E. Dodge** had several pieces of furniture on exhibit at the Essex Institute last fall in Salem. One of the tables was attributed to Moses Dodge, his great, great grandfather who started the furniture business in 1770 and was a Minute Man at Concord and Lexington.

A mahogany sewing table made by **Cyrus Dodge** in 1941 was exhibited, and both were in beautiful condition. The present factory which Charlie is still operating in Manchester, Mass., was built in 1840 and has been in continuous operation since.—**Frederick J. Shepard, Jr.**, Secretary, 31 Chestnut Street, Boston 9, Mass.; **John Noyes**, Assistant Secretary, 3326 Shorecrest Drive, Dallas 36, Texas.

'14

Oliver C. Hall died on Dec. 3, 1965, at his home in Charlottesville, Va. He had four children who survive him, three girls

and a boy. The latter is an M.I.T. graduate. His wife died in 1962. Ollie or O.C. as many called him spent practically his whole life in the communication business, first, with the American Tel & Tel Company in Connecticut, later for the greater period with the Bell Telephone Laboratories in New Jersey and finally with the U.S. Instrument Corporation in Charlottesville. He retired from the latter a few years ago. After his retirement he spent considerable time in assisting the social agencies in his community. We feel a strong personal loss in Ollie's passing. He had experience as a mine electrician before entering M.I.T. As a Course VI laboratory or thesis partner this was very useful. It might be added also that his ancestral roots were deep in colonial tradition, including a signer of the Declaration of Independence.

A news item from the Aviation Daily states "**Donald Douglas**, founder, board chairman and chief executive officer of the Douglas Aircraft Co., will be honored at an October 13 dinner commemorating his 50th anniversary in aviation. About 1000 are expected to attend the dinner to be held in the Beverly Hilton Hotel, Los Angeles. Proceeds from the \$100 a plate dinner will be used to set up a Douglas Fellowship for M.I.T. graduate students in aerospace and allied fields."

A later news clipping giving Bob Consodine's report of the dinner is as follows: "He Paved the Aerial Roadways."

"Donald W. Douglas has a way of making his dreams come true. Hence he held more than a thousand airspace industry people spellbound the other night when he spoke at the Wings Club dinner honoring him for his half century of contributions to aviation."

"Full integration of the supersonic airliner in commercial service appears to be at least 10 years off," said the man whose DC-3 paved the world's aerial roadways. "These first such aircraft are likely to be followed, not too much later, by a much improved second generation type."

"I believe the subsonic jet airliners—greatly improved versions of those we have today—will continue to play a dominant role in air transport for at least another generation and possibly through most of the rest of this century. This is almost certainly true with respect to air cargo, which by the year 2000 could be the larger part of the business."

"Mr. Douglas who dropped out of the U.S. Naval Academy in his third year to enter Massachusetts Institute of Technology in search of an engineering degree that would further his ambition to build planes, spans the history of aviation. His experience goes back to a day at Fort Myer, Va., in 1909, when he watched, bug-eyed, a daring young man named Wilbur Wright buss the parade grounds and barracks in his flying machine."

"It wasn't a case of overnight success for the world's foremost producer of planes."

"When I started my own business in California in 1920 we wanted to build an airplane that would fly non-stop from Los Angeles to New York," he recalled at the banquet. "For those days that was as challenging a goal as going to the moon

is today. The \$15,000 we needed looked as big as the billions we now talk about. And, finally, we had to contend with the skeptics, who couldn't understand why in the world anyone would want to fool around the airplanes when there were other perfectly acceptable means of transport, and many safer opportunities for investment. But we persevered . . .

"He sees a day when the American city, the Megalopolis, becomes so huge that its workers will commute by air from 'suburbs' hundreds of miles away.

"He feels that there will soon be a major breakthrough in fuels used in planes, and that speeds and performance features will be notably increased. He leans toward hydrogen as particularly promising.

"Our accomplishments in space flight make it reasonable to suppose that a ballistic transport may ultimately supply the answer to real high speed, long distance travel," he said in a matter-of-fact manner. "Indeed, if some of the objectionable characteristics of hypersonic flight in the atmosphere prove difficult of solution (sonic booms, etc.), this approach may provide the right answer."

"Domestic air travel will reach 360 billion passenger miles by the end of the century, Mr. Douglas predicted, as opposed to 30 billion in 1960. With more and more leisure time and more affluence will come a sharp step-up in recreational air travel here and abroad.

"Particular attention must be paid to foreigners visiting the United States," he counseled. "In many ways ours remains a somewhat insular society; we have done a minimum in the way of preparing ourselves for visitors abroad."

Recent contacts: A note from **Bob Townsend** tells about an extended see America first trip that he and Maude took during the past year. . . . **Hib Busby** reminds those who are contemplating a trek south that his home in Brevard, N.C., should be a stop en route. . . . **Harold** and **Florence Richmond** are making their more or less regular winter trip to their daughter in Rochester, Minn. . . . Dept. of Nostalgia: As this is written in December our eye dwells on a current news item. Jake Wirth, whose emporium some members of 1914 may recall, just passed away at the age of 86. This establishment, still operating, was started almost 100 years ago by the deceased father.—**Herman A. Affel**, Secretary, Rome, Maine: Mail RFD 2, Oakland, Maine.

Gil Peakes, Wally Pike, Pop Wood, Bill Smith, and possibly some others. The clear close-up pictures of practically everyone there were truly splendid. These are available to any of you who wants to give a show at home; just let me know and I'll gladly sent you the set. Absentees we missed were Bill Brackett, Wayne Bradley, Larry Landers, Al Sampson, Ed Sullivan, Harry and Peter Murphy, Ben Neal, Bill Sheils and Louie Young. Many of these fellows had disturbing situations at home, for which we were all very sorry. The Larry Landers and Bur Swain Annual New York dinner will be reported next month. Present in Cambridge were Larry Bailey, Sam Berke, Jack Dalton, Herb Eisenberg '52, David Hamburg, Jim Hoey '43, Reggie Foster, Clive Lacy, Azel Mack, Archie Morrison, Frank Murphy, Charlie Norton, Stan Osborn, Wally Pike, Pirate and Pirate, Jr., Chet Runels, Jac Sindler, Bill Smith, Speed Swift and Jim Bewley, Fred Waters, Easty Weaver, Pop Wood and Max. Long distance competition brought out a tight race: the Lowell twins Reggie and Chet; Archie and Fred, Marblehead; Larry, South Duxbury; Max, Framingham; Charlie again walking on the waters from Martha's Vineyard; Pop Wood, Peterboro, N.H.; Stan Osborn, Hartford; and the winnah, Sam Berke, Lakeville, Conn., away out there in the corner of the State. The youngest old man in the crowd was Speed Swift from New London, N.H., accompanied by his guest Jim Bewley from up there. Our young guests, Herbie, David and Jim, were as welcome as ever. A fine bunch of Classmates and guests to make this another outstandingly successful and enjoyable evening. After the slide show a number of the fellows came over to our apartment for a late visit with Fran. Charlie Norton stayed over as our house guest. No finer crowd of classmates anywhere! On the night of the famous blackout here, Bill Smith had invited Fran and me to his 19th floor apartment, but, of course, with no elevators running we couldn't make it and certainly envied Bill sitting up there with those candles and all that cracked ice he had ready for us. Better luck next time, Bill. I have had some phone calls and letters from the 1916 officers, Steve Brophy, Harold Dodge and Len Stone, and it's a pleasure to be able to help them on their coming 50th Reunion with some of the material we used. Our sincere wishes to them for a big and successful Reunion.

On stationery decorated with a colored picture of the Mayflower riding at anchor in Plymouth Harbor, **Mary Plummer Rice** wrote to Al Sampson from 191 Throckmorton Avenue, Mill Valley, Calif.: "I ran all around the eastern States, Mass., N.Y., N.J., Chicago, Florida, visited my brother-in-law Herman Affel, 1914, in Rome, N.Y., and finally settled here, where I found a beautiful apartment made to order for my massive antiques and I have almost finished unpacking. In June I'll go to see my son, Deane, get his Master's Degree from Fairleigh Dickinson College in N.J. In the meantime, D.A.R.; Mayflower Society; Community Service and two hospitals will keep me interested and busy. The various class pictures were

excellent and I am so thankful for them." Mary's devotion and interest with her volunteer work is an example to us all.

Follow some more interesting and welcome letters from widely scattered Classmates: **Phil Alger**, "We have just won a great victory, in which I was very active. We have adopted a new County Government Charter in Schenectady." . . . **Sam Berke**, "I must tell you what a wonderful time I had at the Class dinner in Boston in October and I certainly look forward to the dinners to be held in Boston and New York." . . . **Otto Hilbert**, "We left Corning on February 2 and had an interesting three months. We went by ship from New York to Capetown and then worked our way to Kampela mostly by private auto. We saw some beautiful scenery—lost of elephants, giraffes, zebras, hippos, rhinos and impalas and many unusually dressed and undressed people. We had good food, weather and accommodations. From Kampela we flew to Cairo and visited Luxor. We flew to Stuttgart and spent a week with our granddaughter who was there on a high school exchange program. Then to Wiessbaden, up the Rhine to Cologne, then to Rotterdam and home by ship." . . . **Dave Hughes**, "I am sure I had a lot more fun out at the Reunion than I paid for." . . . **Joe Livermore**, "What a good time we had at our 50th. I'll never forget it!" . . . Shortly after our Reunion, Joyce Bardo, Ben Neal's Secretary, wrote from Lockport, "It was a real surprise to receive my gift from the 1915 Class. I won't say 'you shouldn't have done it' but simply will say 'I am delighted.' At present it is in a spot at home where it cannot be missed when walking thru the doorway, so, as Mae West would say 'Come up and see it some time.' Of course, I was thrilled to meet so many of your Classmates and tried not to miss a one of them, and to thank them individually for my gift. I feel it was marvelous for me to have the opportunity to share in your festivities and surely think that I, along with every one else there, should pay the highest tribute to you and your Committee. I shall never forget it!" Very nice, Joyce, and thank you very much for all you did to help Ben. . . . And from Ben himself, "First, I will ever be thankful that you asked me to do the little job that I did, because it was one of the richest things that I have ever had a part in my life—to write the letters that I have written. The answers I received were always occasions of real joy. The finest thing about it was that it was a wonderful example of team work. Jack Dalton's heart was in it all the way and he contributed immeasurably to what was accomplished. And we have to thank Max and George and Clive for their work and all those who contributed so loyally. I had a wonderful time at the Reunion—enjoyed every minute of it. I am actually sorry its all over." Now, isn't that a modest letter from one who did such a superb, magnificent job for 1915 and M.I.T. To pay Ben a tribute, I'm sure Joe Snyder, Treasurer of M.I.T., would permit me this quote from a personal letter he wrote me, "It was very good to hear about your visit with Ben Neal who is, indeed, to be greatly admired for the extraordinary job

The Class Supreme—25 classmates and guests proved this again at a Class dinner, October 29th at the M.I.T. Faculty Club, Cambridge. Another enthusiastic, lively and enjoyable meeting opened with the (old) Pirate, loose and limber as of yore leading a rousing "we are happy cheer." Cocktails and a delicious Bill Morrison dinner put us all in a pleasant mood for the colored slide show of our 50th Reunions. Many "oohs and ahs" gayly greeted these remarkable pictures contributed by Alton Cook, Joe Livermore, Ben Neal,

he did with respect to the Reunion Fund, all to the benefit of the Institute."

Harold Pickering is a heating and air conditioning engineer in Ithaca, N.Y., representing McDonnell and Miller, Inc. of Chicago, manufacturers of steam boiler safety controls. . . . **Ray Stringfield**, Los Angeles, gets good fees and good fun from giving expert testimony on tire troubles, "Thanks so much for the Reunion picture of Course X. The old eggs look almost intelligent, don't they. It was certainly amazing to get 102 of us out for the Reunion, and we all had a grand time, thanks largely to all your hard work. Margaret and I had a fine trip and with rain all over the country, had to drive through only about 15 minutes of it. We visited relatives in Topeka, Kansas, on the way back, and the first night it rained 2.75 inches, and the next night over 2 inches, but we were dry. And at Fort Hayes, Kansas, the highway was dry, but there was water on each side as far as one could see, with trees and parts of buildings up against the fences. Too bad water-starved New York couldn't have had some of it. We put 8118 miles on the car, just to help the gasoline companies out. I keep getting lots of tires to look at. Too bad we have so many bum drivers. . . . I have a tire case coming up in Great Falls, Montana just before Thanksgiving, and another case in Trenton, N.J., just after Thanksgiving. Almost forget that I was once a chemical engineer instead of a tire inspector, but my rubber company in Fullerton still makes lots of rubber parts for the oil tool companies, and currently has 28 presses making these crazy Whammo bouncing balls for the kids. Never can tell what you make a living out of. Best regards to you and Fran. Come out to California again."

Shortly after the Reunion **Herb Whitcomb**, who was with us, had a heart attack and was laid up for a long time. We're all glad to see from his letter that he is better. Stay that way, Herb. "I have been meaning to write you my thanks for the nice letter, while I was in the hospital with my heart attack. I seem to have recovered very well and am now nearly back to normal, but still have to be careful about my diet and over exertion. I was shocked to learn of Ed Whiting's passing for it was only a few months ago that he was with us at reunion. I hear from Speed Swift and Whit Brown at fairly regular intervals. I manage to keep busy with my daily walks and study of the Wall St. Journal. I also analyze a few portfolios for my various friends, which have resulted in profitable switches for them. Recently enjoyed a very challenging analysis of various bank stocks for a midwestern friend." Thanks to our reading public for some kind letters. . . .

Pop Wood's wife Charlotte wrote that "Your notes in the November Review were a masterpiece." . . . **Ben Hurvitz's** wife Rose wrote, "I read your November column through with much pleasure. It is such a thorough and friendly column that I wanted to tell you how I felt about it. I'm sure I'm not alone in this. This goes for Ben, too. Our oldest son, an Associate Professor in Japanese at the University of Washington in Seattle has been notified his name will appear in the Encyclopedia

Britannica." Our congratulations to this young man. . . . Dix Proctor, 1917, with Mel Weill, 1909, were in Cambridge recently and came to visit us. It's always good to see visiting fellow alumni. Dix is a candidate for a charter member of Harold Dodge's, 1916, proposed Union of Class Secretaries. Dix and his lovely wife, Vi, were to leave shortly on their 14th cargo vessel cruise. Brave people! We've lost another good classmate; **Bridge Casselman** died October 30 in Harrisonburg, Va. He was the principal scientist in the research and development department of the American Safety Razor Products Company before his retirement two years ago. He had been with the company since 1950, first in New York and for the past eight years in Staunton, Va. Before that he worked for the Eversharp Company, the Schick Injector Razor Company, and predecessor companies. He graduated in Course X and was an industrial research fellow at the Mellon Institute of the University of Pittsburgh about 23 years ago. It was there he began research on razors. He held several patents concerning razor blades. He was an advocate of soap and water as the best beard softener. He is survived by his wife, Mrs. Merrette Casselman; one son, Robert Casselman, six grandchildren, and a sister, Mrs. Gilbert D. Fish of Pelham Manor, N.Y. Bridge had attended all our Reunions and several Alumni Day Class Cocktail Parties in Cambridge and had always been active and interested in Class and Alumni affairs. He was an active undergraduate, being a member of the Chemical Society; Southern Club; Rifle Club; Technique Electoral Committee; K₂S, Theta Xi and Sigma Xi. We have written to his family expressing our sympathetic feelings.—**Azel W. Mack**, Secretary, 100 Memorial Drive, Cambridge, Mass. 02142.

'16

It's hard to realize but it's only four months to go before the 50th Reunion is upon us. As this scribing gets under way in December, we are being constantly reminded of several subcenters of semi-furious pre-50th activities, as for example, in Newport Beach, Calif., Irv McDaniel and his powerful powers of description and persuasion; in Fair Lawn, N.J., Jim, also known as Jimmy, Evans and his ever-ready fountain pen; in New York, Steve Brophy, Reunion Chairman, with sub-plan after sub-plan unfolding for the 50th, and Walt Binger, Class Historian, mulling over the input from his novel questionnaire; in West Chelmsford, Mass., Ralph Fletcher making sure everything at the reunion will be "best," and Bob O'Brien, Reunion Secretary, getting all ready for the next big mailing; in New Rochelle, N.Y., Joe Barker doing what a Reunion Gift Chairman is supposed to be doing and Mary Barker planning and planning the women's activities; in Detroit, Cy Guething and in Bogalusa, Vert Young, acting like proper regional chairmen; in Jackson Heights, N.Y., Peb

Stone, wrestling with the contents of the evolving souvenir booklet and thanking Azel Mack, '15, for his wonderful help in the field of statistics; in Summit and Mountain Lakes, N.J., Len Best glad that his job of designing and printing the Geographic Register was completed in October, and Harold Dodge keeping up-to-date the uncontrollable growing list of changes in the Register; and in Boston, Izzy Richmond, thinking over the transportation problem to be handled next June.

Now, with just a little bit of repetition, let us say that the 50th Reunion, as outlined by Steve Brophy, includes early registration, McCormick Hall (M.I.T.'s women's dormitory) on Thursday late June 9, cap and gown parade and graduation exercises Friday morning followed by the Commencement luncheon (with 1916 as special guests and Van Bush as speaker), Friday afternoon to Osterville, Cape Cod, for a two-day reunion, return to Cambridge Sunday afternoon to President and Mrs. Stratton's garden cocktail party, Alumni Day luncheon Monday with President Ralph Fletcher and Reunion Gift Chairman Joe Barker speaking, and a musical program in Kresge Auditorium in the evening. The two-day reunion on the Cape will be the real get-together that so many look forward to. The Oyster Harbors Club, with its excellent facilities and food has been the acclaimed choice of many for our five-year reunions when the numbers are large. Following arrival by automobiles or busses, registration, and room-assignments, a social hour is planned until all assemble for an old-fashioned New England shore dinner. As for Saturday, Steve says: "All day and evening—golf, bridge, swimming, boating, loafing, talking, and what you will." For the ladies in the afternoon is planned an automobile tour of Cape Cod, including Provincetown, Chatham, Hyannis, and other places of interest. Again, in the evening, a social hour and the informal Class picture including wives (and husbands). Then the 50th Anniversary Dinner, de luxe—Steve notes: "Entertainment by producer Irv McDaniel and director Jimmy Evans—very brief emotional remarks by our President." As for Sunday, the schedule is quite open, with such activities as sleeping late, socializing, church services, ocean bathing, sightseeing, listening to Bob Whites, and reading the Sunday papers. And at noon Sunday, we will have a famous New England clam bake out-of-doors, weather permitting. Note: weather permitted in 1965 and weather permitted in 1964!

No one blames the Class of 1916 for feeling proud, very proud, of **Van Bush** and his many honors. And now, the new Vannevar Bush Building, and the dedication and opening of the Interdisciplinary Laboratory! In the December issue of the Review—in the account of the new Center for Materials Research and Engineering—did you notice the fine picture of Van himself in the lobby of the new Center? We'll have a copy of the picture on the bulletin board at the Reunion in June, and in Cambridge you'll be able to read the inscription on the lobby wall, that goes like this: "Dedicated to Vannevar

Bush, Class of 1916; an engineer distinguished for his creative contributions to science, engineering and the Nation. Honored for his achievements in research and education; for his devoted service to the Massachusetts Institute of Technology as teacher, administrator, and Corporation Member, for his acclaimed leadership of the Carnegie Institution of Washington; for his mobilization during World War II of the Nation's scientific resources to achieve advances in military technology decisive in the winning of the War; and for his statesmanship in formulating and advocating sound policies for the advancement of science, engineering and education. October 1, 1965." Warm congratulations, Van!!

And the **Art Shueys** continue to go places and do things as you now will see from a letter from Shreveport: "Last May we flew down to Yucatan to see the Mayan ruins and had the pleasure of spending several days with John B. Lunn, President of '17, and his cousin. He went on to the Tech Alumni Fiesta in Mexico City and we went to Cozumel for a week and then 10 days in Guatemala. This summer was divided between trout fishing in Marble, Colo., and music in Aspen. Back in time to help marry off our eldest grand-daughter. Three weeks ago I lost my gall bladder—all republicans here vie with L.B.J.—and frankly I feel as well as he seems, in spite of 15 years advantage he has on me. We will see you next June."

Blythe Stason finds life for the Stasons far more peaceful in Nashville, Tenn., than it has been at any time for the past 30 years. "Nevertheless" says he, "it remains reasonably productive. A so-called 'distinguished professorship' in Vanderbilt Law School, plus plenty of consultation work outside my ivy walls, leave no time for concern over the advancing years. We are looking forward with pleasure to the activities next June. Fifty-year reunions don't come too often and we can't afford to miss it." . . . **Mac McCarthy**, retired chairman of Chance Vought, writes that he and Betty are giving up their apartment in New York for a home in Connecticut—55 Hillside Dr., in Greenwich. Mac has completed his term as President of the Flight Safety Foundation, but continues to serve this organization as a member of the Board of Governors.

George Maverick writes from his Shepherds Hill Farm in Charlottesville, Va., where he settled some years ago, leaving his top research job with Standard Oil of New Jersey to help set up the Graduate School of Business Administration in the University of Virginia. A year and a half ago he turned 70 "when professors have to quit—but I was downright surprised such rules had to apply to me." He notes that he and Ruth enjoyed a drive to San Diego with many stops with relatives and friends and at meetings of historical societies and the Conservation Society Annual Meeting in San Antonio. For him, the new interstate highways and an air-conditioned car "surely cut out the drudgery." And last spring they went to England for eight weeks. Says: "I am still active on the Executive Committee of the State Mental Health Association and

Ruth is more so on the Albemarle Historical Society. Most of our time is spent fighting our 260 acre jungle. Given time the jungle always wins. But now the chain saws and Scout Four-Wheel Drive have us wonderfully prepared for the winter. As I weaken mentally I get stronger physically. See you all in June."

John Fairfield writes concisely: "Doing—gardening, Greek, consulting, music, art (retired). Going—wife went to Africa (Ethiopia to Cape) on camera safari (without me). Seen—none of '16. Philosophy—cultivate family, friends old and new, memories, cheerfulness, hobbies, postpone age, quiescent, devitalized, uncreative, desiring peace and sleep above all else."

One of the rewards of being a Class Secretary is that you can easily make friends with one or more young philatelists. Just for example, we have received from **Joel** and **Virginia Connolly** in the past two months, cards and letters with stamps of Taiwan, Hong Kong, and Tonga, for they were back visiting in the Pacific after four years absence from Taiwan. The envelope from the Tonga Islands bears the postmark "Niuafu'o, Tonga", and two stampings that say "Niuafu'o Island, Tonga Islands, despatched by canoe mail," and "Tin Can Island Canoe Mail." Joel notes that the little island of Niuafu'o is about three and one-half miles long by three miles wide. It is of volcanic origin and has a long record of serious eruptions, in which parts of the island were devastated. "Following a violent eruption during September, 1946, the 1330 inhabitants were removed. After 12 years' absence, over 200 former inhabitants have returned and started rebuilding their homes and villages. There is no good anchorage at Niuafu'o as the bottom is rocky and irregular and slopes down steeply into deep water. At one time passing steamers would seal inward mail for the island in 40-pound biscuit tins which were thrown overboard to be towed ashore by waiting native 'postmen.' From this unique method of mail delivery the island became known as 'Tin Can Island.'" The Connollys now live in Tucson and we are hopeful that we can hear more of their experiences in the Orient at the 50th next June. In Taipei, Joel talked with Mr. K. T. Li president of the Chinese Society for Quality Control with whom your Secretary had corresponded last February. And Joel also writes: "I talked by 'phone with **Eddie Clarkson** of Oakland, Calif., shortly after we landed in San Francisco. He said he is working to get people on the coast to attend the class reunion in 1966."

Allen Pettie in Tryon, N.C., finds that his Yale reunion comes a week later than our 50th so he has no "agonizing appraisal" to make—he and Mrs. Pettie will be with us. . . . **Obie Pyle** continues on the active list of reunion workers and still basks in pride in reference to his son Randy's cum laude performance and graduation last June from Harvard. Obie has a fine long letter from **Rafael (Raef) Alfaro-Moran** in San Salvador, El Salvador, C.A. (street address 41 Ave Sur 527). Since a serious accident a little over two years ago, which partially crippled him,

Raef has been retired and does little traveling. In his letter to Obie, he writes: "As for me over here, I was very active during most of the time. I have had a coffee processing and exporting business. I headed a firm of real estate developers of one of the nicest residential districts in town and I helped organize and run the cement plant in this country. Up to the time of my accident I was still going strong but now I have retired and lead a very quiet life since my leg is a great handicap. I do a lot of reading and follow the news through periodicals like Time and Newsweek and to tell the truth I don't like what I read for I certainly don't believe in any welfare state, nor do I believe in buying votes through handouts. . . . If you see any of the fellows who remember me, give them my best."

Five '16ers sent us a copy of that article in the November 14 issue of the Boston Sunday Herald on the subject "Flying Architect from Boston," meaning, of course, our **Izzy Richmond**. One of the four pictures, and perhaps the best one, a really good 1965 picture of a successful business man, carries the caption: "Boston's 'Flying Architect' Isidor Richmond, boards his Cherokee Piper 140 for business trip to the mid-West. He has been flying since 1917 when he joined the Navy during World War I." It looks just like Izzy looks when he comes to reunions, just the same for example as last June when he took Cy Guething for lunch and a swim in Martha's Vineyard while reuniting in Chatham. And other pictures in the article read like this: "Naval Aviation Cadet Richmond was first impressed by the uniforms issued to flying cadets—but he has never lost his love for getting up in the wild blue yonder," and "Things were different when Richmond learned to fly. Standing on a pontoon, he poses beside the plane in which he learned to fly at Pensacola, Fla., in 1917," and "During World War I lumbering flying boats patrolled waters off Cape Cod. It was in one of these that Richmond began his long association with aviation." The article tells of early struggles and later successes. In the early '20's he became interested in the Rotch Traveling Scholarship. He spent a year preparing—but failed to pass the scholarship examination. But: "The year 1923 was a different story. Isidor Richmond was named to the Rotch Scholarship and went to Europe for two years study. He was able to visit the great architectural monuments of past centuries, learn sketching and water coloring, and immerse himself in the Gothic glories of France and the Medici marvels of Italy. Back in Boston, he plunged into the major task of making a living through architecture." The rest of the story will be good reunion reading.

Here's an interesting story from **Walt Binger**, which perhaps illustrates again how small the world is. Walt writes: "When I was in Boston for the meeting of the National Audubon Society in October, my wife and I were invited to dinner by the general counsel, who is also a member of the Board, and his wife. He told me that we were to meet Professor and Mrs. Gordon Fair of Harvard and that Mrs. Fair is his cousin. He found

out that Gordon was a classmate of mine. However, as soon as Gordon knew who the other guests were to be he insisted that the party be at his house. It was a delightful evening as well as an excellent dinner. Gordon has retired as Harvard's distinguished Gordon McKay Professor of Sanitary Engineering, Dean of the Engineering Faculty, and Master of Dunster House. He is still as active as ever in important research which he told me about. We had not seen each other for years but it seems to have made no difference at all. He said he would be unable to attend the 50th Reunion since he would be in Holland at the University of Delft as a Visiting Professor."

Shatswell Ober says he is still "Honorary Lecturer—only a title, for I give no lectures"—in the Department of Aeronautics and Astronautics at M.I.T. As for philosophy, he has this on Vietnam: "If one wishes to disagree vocally with the Administration's policy, seems to me that is one's privilege except for poor propaganda effect on our enemies, BUT proposing to send or sending plasma, drugs, etc. to either the Viet Cong or North Vietnam is giving aid and comfort to the enemy; that used to be treason." . . . We were glad to hear from **Ned Hewins** in Hampton, Va., who retired in 1958 from the Engineering Technical Department of the Newport News Shipbuilding and Dry Dock Company. Says Ned: "This enabled me to be with my wife, Eleanor, until she died of cancer. In 1962, I was fortunate enough to persuade a charming widow with two delightful children to take on a third child, or, at least, one in his second childhood. Consequently, with Boy Scout activities, wrestling with modern math, and attending to the miscellaneous duties of assistant housekeeper I have not had time to be bored. My summer schedule includes teaching the kids how to sail. Our house is on the north shore of Hampton Roads which is alive with Sail Fish in warm weather, so my immediate problem is to find the cash to buy a Sail Fish and attend the Reunion all in the same summer." . . . Now in December, **Cy and Gyps Guething** are planning to go back to the Bahamas this winter in spite of the heavy damage by hurricane Betsy. Cy says snapshots and letters from Harbour Island and North Eleuthera tell of the havoc raised with the scenery. "The large trees look as though they had been through a strip tease act—there was little actual property damage. Over at Hatchet Bay, Eleuthera where we get our eggs, milk, butter and dairy products, they lost over 3000 chickens and much property was destroyed. The storm remained over those parts for about 24 hours."

Bill Drummey may not remember, but way back in 1949 when your secretary was a speaker at a national convention of the American Society for Quality Control in Boston, Bill was the official representative of the then-Governor and welcomed us all to Boston. He did a good job too! Today, he says he is in good health "due, doubtless, to the sanctity of my living but I notice a strange increase in the weight of customary objects that must be lifted! Recently returned from a delight-

ful, paid vacation in England where I was Chairman of a Board of Arbitration. A truly pleasant life could be spent shuttling the Atlantic on ships like the Rotterdam. Am sitting on a Commission here to determine if the Back-Bay is 'an Historic District' (negative vote), and if high-rise apartment buildings will be allowed on Commonwealth Avenue (still to be determined). Some really alarming foundation conditions have been discovered." . . . From **Eric Schabacker** comes word that they have seen **Ray and Melva Brown** twice this past summer. Further: "Maud and I enjoyed a Cook's tour this summer through the northern Rockies with a very congenial group, ending up with Jasper Park. Then to Salt Lake City where Maud lived 60 years ago, and to Denver to visit our daughter and her family of husband and seven children. Our son Robert has just resigned after 20 years in the Navy and has joined our son-in-law in the little enameling shop which I helped to organize in 1946. I am amazed at the enthusiasm and efficiency of our 50th Reunion committee—more power to them. We hope to be there."

Ed Clarkson of Oakland, Calif., in a letter to Mac McCarthy tells a bit of his history since he went to California in 1922 at the urging of John Chase '18. First with the Santa Fe Railroad in Arizona, later with a consulting engineer in San Diego, he went to Los Angeles in 1925 where he found W. T. Knowlton '93 and became a junior engineer in the City Engineer's Office. He worked there for almost 30 years "mostly on hydraulic design, such as sewers, pumping plants, storm drains, etc. Los Angeles is a city of over 450 square miles and everything done in engineering is big. The sewage treatment plant at Hyperion cost over \$40 million. When I retired 12 years ago, the freeway program in the metropolitan area of Los Angeles was estimated at one billion dollars. In September 1941 I was called to active duty in the Army, served for about three and one-half years, and am now retired and draw pay as a Lt. Colonel. . . . Have traveled in Mexico quite a bit, and enjoy this beautiful country. Have learned the language enough to get by. When in Mexico 10 years ago, I took up water color painting, and have had some success. Sold a couple of paintings on the New York market last year for \$100 apiece." We look forward to seeing Ed in June.

Bob Burnap reports a quiet summer with perhaps above-average attendance at the World's Fair, with emphasis on the foreign exhibits. To keep the old thinking going, Bob took on last spring the job of member of the Board of Trustees of the South Orange-Maplewood, N.J. Adult School. Says he's not sure how useful he is going to be but it will be a new experience.

Once again, remember you have some old friends waiting for you for lunch once a month, at the Chemists' Club, 52 East 41 St. in New York, at noon on the Thursday following the first Monday of each month. On December 9, the '16-'17 group with four or more tables pushed together, totalled 17, with the following '16ers present: Joe Barker, Len Best, Art

Caldwell, Harold Dodge, Jimmy Evans, Herb Mendelson, Francis Stern, and Peb Stone. We might mention that the score was to be tied by the arrival at 3:00 o'clock of Blythe Stason of Nashville, Tenn., but if we were to do this, we would also have to mention that Dix Proctor, '17, said that they, too, were expecting a late arrival. But do come and try a delicious golden buck at the Chemists' Club!

We have a number of address changes to report since the new Geographic Register went out in November. **Arvin Page** reports from Winston-Salem that **Judd Vile** is back in Connecticut and is temporarily with his daughter at 41 Indigo St. in Mystic. . . . The **Howard Smiths** of Mystic give their winter address as Cee Bee Marina, Deerfield Beach, Fla., and the **Ed Williams** sent a card from Richmond, Va., en route to their winter location: Langford Terrace Villas, Jensen Beach, Fla. . . . **Lev Lawrason's** address is 1681 Tam O'Shanter, Seal Beach, Calif., and **Charles Glann's** address should be changed to 161 East Sixth St. in Oswego, N.Y. . . . **Andrew C. Witherspoon** has moved from Annapolis to 2427 Tuttle Terrace, Sarasota, Fla.—same Zip Code as Emory Kemp.

We are very sorry to report that **Ralph Spender's** wife passed on in November—services in Cleveland. Ralph's present address is P.O. Box 227, Wellesley, Mass.

And now the column comes to a close with the suggestion that the Reunion dates, June 10-13, be marked in red crayon on your calendar. Help keep the column busy and interesting by writing a little but often to one of your officers: **Harold F. Dodge**, Secretary, 96 Briarcliff Rd., Mountain Lakes, N.J.; **Ralph A. Fletcher**, President, Box 71, West Chelmsford, Mass.; **Joe (J.W.) Barker**, Vice-president and Reunion Gift Chairman, 45 Beechmont Drive, New Rochelle, N.Y.; **Hovey T. Freeman**, Treasurer, 45 Hazard Ave., Providence, R.I.; **Steve (T.D.) Brophy**, Reunion Chairman, 470 Park Avenue, New York, N.Y. 10022.

'17

As of the 3rd of November we are advised that **Conchita Lobdell** arrived back home in Mexico, Sunday October 24, and comments, "I have a big load of wonderful memories which will always bring me great joy to bring out, and will help in the grey lonesome days one always has—to be at the Reunion with my Classmates, and to have the chance to visit with them was so wonderful, and of a great meaning to me." Here is hoping we will see Conchita at the 49th and surely at the 50th.

One of our notices for the December luncheon at the Chemists' Club in New York has been returned advising "Deceased October 1965." This had been sent to **Herbert G. Burk**, care of the Public Electric and Gas Company, Newark, N.J. . . . **Stanley K. Cooper**, Course II, of 69 Cambridge St., Winchester, Mass., died February 15, 1965. From the 30th Anniversary notes, he reported that during

World War I he served as an Ensign attached to Submarine Chaser #355. Following this he was connected with Johns Manville Corporation. His comment at that time was, "I am more sold with M.I.T. as the years go by—a grand Institution, doing an outstanding job."

Raymond W. Drobisch, 3613 Garrison Road, Toledo, Ohio, Course II, died August 1, 1965. The 1930 anniversary book records him as having been Chief Development Engineer with Swartz Baugh Manufacturing Company, of Toledo, Ohio. . . . **Simpson R. Stribling** Course VI, died and was buried Nov. 30th, 1965 in Arlington National Cemetery. Newspaper article reads as follows, "Colonel Stribling who helped Gen. Billy Mitchell prove the effectiveness of air power, died at Walter Reed Hospital, following a long illness. Col. Stribling, 72, lived at 9611 Glencrest Lane, Kensington. An Ordnance specialist, he was in charge of weapons during the special airplane tests conducted by Gen. Mitchell at Langley Field, Va., in 1923. By sinking captured German battleships, the test demonstrated the vulnerability of ships to air power. He was born in Waco, Texas, and graduated from Texas A & M College in 1915. After taking a degree in Electrical Engineering from M.I.T., he was commissioned a Lieutenant in the Artillery in 1917. A Howitzer Battery Commander in France in World War I, he served in the office of Chief of Ordnance here during the second World War. He was consecutively Chief of Production, Engineering Branch, Chief of Heavy Artillery and Head of the Facilities Section. He later served with the Military Advisory Group in the Philippines, and was Commander of the Augusta, Ga., Arsenal at the time of his retirement in 1953. A special consultant with the Electronic Division of ACF Industries, he spent five months as an advisor at the Atomic Bomb Tests on Eniwetok Atoll in 1954. He was awarded the Legion of Merit, the Most Excellent Order of the British Empire, and the Philippine Legion of Honor. He is survived by his wife, Alice S. and two daughters Mrs. Arthur B. White, 8513 Meadow Lark Lane, Bethesda, Md., and Mrs. Roger Williams of Singapore."

Dean H. Parker writes, "I greatly enjoyed the Alumni Conference and also had an opportunity to visit all my New England relatives that weekend. Also stayed overnight with my son and his family going up and coming back at Old Greenwich, Conn. We are leaving this week, November 15, 1965, for Florida. My address until further notice will be 1825 New Point Comfort Drive, Englewood, Fla. 33533. I hope to come north next spring, and will be either here at Grosse Point, Mich., or at the Marina in Bay Shore, Long Island. I see **Al Litchfield** occasionally. His older daughter was married this summer. His younger daughter has been married for several years, and has two children and is living in Rochester, N. Y. Our oldest grandchild is a junior at Wells College at Aurora, N. Y. The next oldest is a sophomore at Wittenberg College in Ohio. The 3rd will be going to college next Fall, and so on down the line of 22 at present writing.

A public relation release dated October 28, 1965, reads as follows, "Dr. **Wm. H. McAdams**, Emeritus Professor of Chemical Engineering at M.I.T. and a pioneer dealing with Heat Transfer, has been elected a Fellow Member of the American Society of Mechanical Engineers. Announcement of the election was made by O. B. Schier of New York City, executive director of the ASME. Presentation of a Citation was made to Dr. McAdams at his home, 31 Claremont, Newton, Mass., by Dr. Warren M. Rohsenow, Professor of Mechanical Engineering at M.I.T. Professor McAdams in 1933 wrote the first English language textbook on Heat Transfer. The book is used as a notebook by engineers in the field and continues to be used as a textbook in Colleges and Universities throughout the World. He graduated from the University of Kentucky and in 1945 was awarded an honorary doctors degree by his alma mater. He first came to M.I.T. in 1914 as a graduate student and returned in 1919 to join the faculty, of which he had been a member ever since. He was for many years a lecturer in Chemical Engineering at Harvard University, and since his retirement in 1957 has served as lecturer at the Institute."

As of November 15, 1965, the members of the **Lucius Tuttle Hill** Heart Club will be interested in One Day's Activities of the Founder of the Club. On the morning of the 10th he conferred with fellow officers of the Eastern Utilities Associates on the aftermath and implications of the proceeding day's Great American Black Out. In the afternoon he skipped his rink to victory in the first match of the Curling Season. In the evening, as historian of the Grand National Curling Club of America, he attended an annual Curling dinner. (Good luck and more power to you.)

From the Connecticut Development Commission's monthly bulletin we read that **John DeBell** is still on the move, "DeBell and Richardson is building a 17,000 square foot addition to its plant in the Hazardville section of Enfield. Executive offices will be housed in the upper floor. The lower level will contain the engineering laboratories. The addition is expected to be in operation by the first of this year. The plant occupies a 90 acre site. DeBell and Richardson is one of the largest independent laboratories engaged in the field of Plastic Technology."

Enos Curtin writes he was very lucky in the Great American Black Out, walked up six flights to his apartment, then out to dinner nearby and up seven flights, and back up six flights to home, which sounds like he is going strong. Last time your assistant secretary was at the Penn Station in New York he became lost in the many demolition projects there and maybe Enos Curtin can give us a progress report on the new Madison Square Garden.

Burt Morton wrote from Union, Maine, on November 4, "Am sorry I am still going to be up in the Maine woods for a few more days so will miss the November 4 meeting at the Chemists' Club, but expect to be with you in December once more." Burt managed to get back in time

for the December 2 dinner meeting of the M.I.T. Alumni Center of New York. Incidentally, the subject was "What are the True Facts About the Water Shortage," and I believe the question and answer session, after the talk, was the longest on record. Must be a great interest in H₂O; which brings to attention the current billboard ad in and about New York that nothing makes water taste better than scotch, and just recently the ad has the word "water" crossed out. By 1975 the reverse will probably be in order as of now the per capita use of water is 150 gallons daily. By 1975 this is estimated at 210 gallons. The solution is up to the Chemical and Mechanical engineers.

Bob Scannell writes that he is still a practicing architect; "My heartiest congratulations to you for the good work you are doing for M.I.T. and I wish I could do more. One of these days I will surprise you and turn up at the Chemists' Club for lunch, so keep the cards coming—sorry I can't make it tomorrow."

At the December 9 '16-'17 Class Luncheon at the Chemists' Club there was not one surprise, but three—more next issue.

I trust all Classmates have by this time read both Ray Stevens's letter of November 26, 1965, and the M.I.T. News Letter of the same month by the Chairman of the Alumni Fund Board.—**W. I. McNeill**, Secretary, 107 Wood Pond Road, West Hartford, Conn. 06107; **C. Dix Proctor**, Assistant Secretary, P.O. Box 336, Lincoln Park, N.J. 07035.

'18

When Voltaire said in *Candide* that all is best in the best of all possible worlds, he was taking a jibe at the optimistic doctrines of Leibniz. Nevertheless, most great men are optimists. In the long run it is they and the idealists who turn out to be right, not the practical men and the pessimists. For greatness is a certain quality in a man's life: an inward vision, purpose, hope, capacity to accomplish against odds, knowing that habit enforced grooves of thought are the exact opposite of an ability to think, and the realization (which most men lack) that it is almost always earlier than we think. There are millenniums yet to come. On November 15 I was the guest of our own Ambassador to the United Nations, **Bill Foster**. Yes, he too, is rated as an ambassador; one who has behind him great power of purpose; one whom five presidents of the United States have called by his nickname because he so ably accomplishes things; one who has always been an optimist. As we moved about, it was gratifying to observe the high regard which other ambassadors had for him, and to watch the acuteness of his own insight. Austere and forbidding world tensions demand his pulse-quicken- ing concentration, and yet the little details do not escape him. For example, in our correspondence concerning my mission (which was in the interest of a conference on Education for Peace at the lit-

the college to which the tolls of increasing age have taken me), his salutation in a letter was my college nickname. Said nickname has been one of life's minor annoyances to me. To have protested as an undergraduate would have been futile. Nor did I protest to Bill. My responding letter was merely signed by my given name which, with great courtliness, he used throughout our conference. As the Germans say, the little thing reveals the big things. William Chapman Foster is a far greater man than most of us have realized. It is a lot earlier than we think in estimating his importance. We should all rejoice in a classmate who, in world politics, can distinguish between that which is first-rate and that which is inferior, that which is important and that which does not matter, that which is profound and that which is only obscure, that which is true and that which is mere pretense. Bill, we wish your mother were still alive so we could all tell her how grateful we are that you were born, and that she brought you up to become an optimist. My own life has its nimble flair for variation and incongruity. The day following my dizzy jubilation at the United Nations was spent personally digging out a costive cesspool which has had no attention since 1939.

From **Malcolm Baber** in Philadelphia comes a letter which is a bit like clover holding pearls of dew. "Your Class Notes caught me in the hospital recovering from a hernia operation. Having reached the annoying stage of the urge to be doing things, without the ability to do them, I cannot tell you how refreshing it was to read the account of those golden days at Osterville's Wianno Club. It was such a delightful get together. We had a great summer. Both boys were away and except for a short trip to Maine we stayed at home. I usually get to the local M.I.T. club affairs, but have no special news to share. The Class Notes give me a lot of pleasure and I just wanted to say so." Malcolm is one of those classmates with a genius for making the best of all possible worlds even brighter. It was he who suggested last June that those of us who have been more generously treated by the gods of finance put together the frosting of a fund to help defray the extra expense at any subsequent reunion, and to give a bit of anonymous help to some whose previous contributions to the class deserve our collective gratitude and who would otherwise be unable to come. The following day Malcolm backed up his generous words with coin of the realm, to be followed by **Hall Nichols** and others who have an inward vision, purpose, hope, capacity for helping to accomplish things against odds. The money, together with any you may add, is deposited with the M.I.T. treasurer, to be held at interest until 1968.

As for the "extra expense" mentioned above, there could be no better place to salvage a paragraph omitted from the notes which were written for the November Review. I quote: "Friday afternoon, with swift and shrewd intuition, our president gave a cocktail party which immediately established the old camaraderie. The result he obtained deserves consider-

ation by reunion committees. There were no small groups uneasily hidden in remote rooms, no awkward reluctance on the part of some classmate present for the first time in a quarter century, no time lost by not immediately infusing the reunion with a warm friendliness which both encompassed and enveloped everyone. The hors d'oeuvres, which **John Kilduff** prevailed upon the management to provide on short notice, were a sufficient catalyst to start congenial conversation everywhere. Even the most reluctant brother who had never attended a previous reunion could not possibly imagine any chill of indifference or undertone of melancholy. In a matter of moments our hearts were back in college garb, suitable for a vigorous young man of twenty. Enchantment was irrevocably established for the whole weekend by the interweaving of memories, food, friendship, and emotions." . . . The inward vision, purpose, hope, and capacity to accomplish which partly identified **Frank Copeland** as a unique personality, became a finished thing on October 10. He had been an aeronautical engineer with the United States Navy, living in Silver Springs, Md. —**F. Alexander Magoun**, Secretary, Jaffrey, N.H.

'19

F. S. Adams writes, "Retired in 1962 from construction work and now we are in Paducah, Ky., after many years of moving around. Does anyone know how **Morton Smith** is doing—another Great Barrington, Mass., boy ('19)?"

Rod Bent is still increasing the manufacturing of Early American Chairs and says he has the most up-to-date manufacturing plant. He enjoys going around the country in his "Cherokee 180." He has a fishing camp on the Miramichi and would welcome guests in the month of July. This year he has fished in Esquel, Argentina, Anticosti, and on the Miramichi River in New Brunswick, Canada, where **George McCarten** has been his guest. He is now Chairman of the Board of the First National Bank of Gardner, Mass.

Aubrey Ames has worked out a routine which sounds pretty good. Fishing on Thursday, golf on Friday, weekends up on the farm, and the rest of the time "doing the miscellaneous tasks that fall to a retired taxpayer." He hopes to attend the 50th. . . . **Ben Bristol** was in England, France and Holland this Fall. His wife had an operation on her hip in September, but happily is coming along well. . . . **Ray Bartlett** was laid up last year with a badly broken ankle. He retired from the Stanley Works as of December 30, 1964 but has been doing some consulting work for the two Stanley divisions and for the State of South Carolina in Technical Education. He has moved to Fort Lauderdale, but has kept his summer home at Norwich Lake, Huntington, Mass.

Ellsworth Paterson has been in Europe and around the world this last year.

He is secretary of the International Electro Technical Commission on reliability. . . . **Pete Blye** is retired and just loafing. He is vice-president and on the executive committee of Pioneers, life members of the Bell System. . . . Your annual giving until the year 1969 will be applied to 1919's 50-year gift. **Don Way** and **Paul Sheeline**, chairman of the fund drive tell me that the class is responding very well. . . . Don reports that **Larry Riegel** is still active as Chairman of the Board of Riegel Paper Company.

Your Secretary is going to Florida after January and will be at 1111 Casuarina Rd., Delray Beach, Fla., until the first of April. . . . We are sorry to report the death of **Claire Acker** on September 22, 1964, of a heart attack. He was living in Nevada City, Calif., at the time of his death. His work was big building construction. . . . Also, Dr. **Thomas M. Broderick**, Calumet, Mich., passed away on August 28, 1965.

New addresses: **Ray Bartlett**, 4485 N.W. 17th Terrace, Ft. Lauderdale, Florida, 33313; **Dugald W. Campbell**, 330 Bitterbush St., Orange, Calif. 92668; **George L. Baum**, Apt. 4, 421 N.E. 35th St., Miami, Fla. 33137; **Karl F. Rodgers**, c/o R. D. Morton, 81 Lane Ave., West Caldwell, N.J. 07006. **Herbert L. Duffy**, 741 Wilkie St. Dunedin, Fla. 33528.—**Eugene R. Smoley**, Secretary, 30 School Lane, Scarsdale, N.Y. 10583.

'20

From Tehran, Iran, came a most interesting letter from **Harry Kahn** enclosing a clipping from that city's newspaper headed, "Iran's Industrial Institute of Technology To Be at Par With the Massachusetts Institute of Technology." The chairman of the Board of Trustees' 30 members was quoted as saying, "The M.I.T. is acknowledged as the most comprehensive and the best institution of its type in the world." As if we didn't know! Harry is representing the International Executive Service Corps, a private organization to aid industry in semi-developed countries. As one of our country's top ceramic authorities he is trying to get some order and quality into a ceramic tile plant in Tehran. He describes Tehran as a fast growing city of some two million, including three thousand Americans. Says Harry, "On highways that would do credit to good sized U.S. cities you find shepherds crossing the road with a hundred sheep or goats. Many buildings are modern but many, many women still wear the Chador." Harry attended a Harvard-M.I.T. Club luncheon at which nine of the 16 present were M.I.T. men, all Iranians. By the time you read these notes he should be back home, a classmate who continues to add luster to the accomplishments of his class.

A welcome Christmas message from **Bill Freeman** says, "I hope your retirement is proving as happy as mine—I still get a kick out of every day." As evidence that Bill's so-called retirement is far from inactive, his picture appears on the front

cover of American Tung News as newly elected President of the Tung Research and Development League. Bill, a retired Navy captain, has been active in the tung oil industry ever since he moved to his Runnymede Plantation near Poplarville, Miss. He is a director of the American Tung Oil Association, and Marketing Cooperative. Certainly, Bill continues to be a credit to his class.

At the December meeting of the Alumni Council **Al Burke** was presented with a citation "In grateful recognition of the outstanding record of the Class of 1920 in the 1965 M.I.T. Alumni Fund." I think we can accept this not only as a well-earned tribute to the untiring and successful work of our Class Agent on the Fund, but to all classmates who have rewarded his efforts.

Art Radasch gave a talk not long ago at a meeting of the Longmeadow (Mass.) Historical Society, subject "Genealogy as a Pastime." Art and his wife Katherine lived in that area at one time before he became head of the Department of Chemical Engineering at Cooper Union. He is now retired and living on Cape Cod. . . . **Tom Orchard**, of 2747 Fairmount Blvd., Cleveland Heights, retired in 1963 after having served as executive secretary of St. Paul's Episcopal Church of Cleveland Heights for the past 26 years. He spends seven months of the year in Cleveland, one month in Florida and four months in Rhode Island and on Cape Cod. We'd like to hear from you, Tom. . . . **Henry L. Nash** is in Sarasota, Fla., at least for the winter—address 761 Ringling Blvd. . . . **Fred Fischer**, who was president of Allied Paper Mills, Kalamazoo, before retirement, is Fund Chairman for Kalamazoo College, now on the way to a successful multi-million dollar drive for capital funds.

I regret to report the death of **Willard Riddell** of Hamilton, Ontario, in December, 1964, and of **Roland Baker** of Phoenix, Ariz., in January, 1965—**Harold Bugbee**, 21 Everell Road, Winchester, Mass.

'21

Most welcome news has just arrived from the Alumni Association regarding Technology's gracious and generous offer of free housing, breakfasts and entertainment on campus for Alumni Day to those who participate in our 45th Reunion. M.I.T. magnanimity thus heightens the attraction of our holiday pair of events during the period from June 9 through June 13, when we will first meet at the Hotel Griswold in Groton, Conn., and then journey to Cambridge on Sunday afternoon, June 12, for the following day's observance of the 50th anniversary of the Institute's move to Cambridge. We will brief the news for you here; please see the special reunion mailing for details. Return that questionnaire IMMEDIATELY! Say you'll attend both events and bring your wife, too—we all want to see you! In any event, please complete and return the questionnaire, even if you can't be there. Not that the special cour-

tesies for Alumni Day are available only to those who attend the reunion at the Griswold. They can be obtained through your Reunion Committee, as explained in the mailing you have received, and comprise a room for you and your wife with the '21 group in one of the dormitories on Memorial Drive for Sunday and Monday nights at no charge, as well as breakfast on the campus on both Monday and Tuesday mornings, also at no charge. Three floors of the Senior Dormitories have been reserved for the Class of '21. As a special feature on Sunday evening, cocktails and dinner will be available on a Dutch-treat basis in the attractive M.I.T. Faculty Club dining room in the Sloan Building, to be followed by a special showing of Jacques Costeau's "World Without Sun" movie, together with a film of his most recent experiences. The program for our 45th anniversary celebration at the Griswold is fast taking shape and there will be superlatively enjoyable events for all classmates, their ladies and guests from early arrival on June 9 up until our departure for Cambridge. Transportation from Groton to M.I.T. is available at no charge from classmates on application to the Reunion Committee. Preliminary releases on the Alumni Day program also indicate outstanding morning and afternoon features, the ever-popular luncheon in the Great Court, the cocktail hour, the "speechless" banquet and a vital new evening program in Kresge Auditorium. Give yourself and your wife the vacation treat of almost five days of top enjoyment with some of the grandest guys and best friends you have ever known. Mail that questionnaire NOW!

Thanks to **Chick Kurth's** zeal as a reporter, we have the illustrated "Profile in New England Business" from the financial section of the Boston "Morning Globe." Under the headline "Dennison President Machinist at 11," is a portrait of **Dana Huntington**, who heads the Dennison Manufacturing Company of Framingham, Mass. Dana, says the report, had always worked; in the third grade, he had been the school janitor at a salary of 50 cents a week and, when he was 11 years old, he had to stand on a box to operate a machine in a shoe factory in Danville, N.H., where he lived. His family convinced him to go to Phillips Exeter; he worked there, too. He joined us in the freshman year; at its completion, he enlisted in the Army and went to Officers Training School. He later went to Dennison as a cost clerk and modestly says he got to be president by hard work and good luck in happening to be at just the right place at the right time when someone was needed. Dennison is best known as a paper converter, producing labels, tags, crepe paper and numerous other products for use in homes, offices, schools, factories and just about everywhere else. Dana has pioneered in advancing the company through new products, two of which are the recent "Therimage" process and the Dennison Copier. The first of these is a method for labeling plastic containers by heat transfer. The second is an office copier developed by Dennison and test marketed during

the last year or two. Dana makes his home in Hampton, N.H., where he is active in community life and in many hobbies and pastimes.

At this early December stage of receipt of returned questionnaires from the Class, your excellent response indicates that at least half of those answering expect to attend both the 45th Reunion and Alumni Day 1966. If this percentage continues, we will certainly enjoy the biggest reunion we have ever had and the return of many classmates whom we have sincerely missed seeing over the years. Perhaps the anticipated good attendance may be due in large measure to the fact that so many of the Class have now retired and will make use of the New England trip as a basis for vacation travel, together with the unusual opportunity to renew old associations and to see the modern marvel which is the new campus of Technology. This is indicated by the further fact that 80 per cent of those answering so far say they have retired, but there are still many "in harness" who also say they will attend. . . . **Joseph C. Morrell**, 90 Bryant Ave., Dorset 5B, White Plains, N.Y. 10605, says he retired as chief appraiser of the Albert W. Lockyer real estate firm of White Plains but continues his activity as a real estate consultant and review appraiser. He plans to be at all reunion and Alumni Day events. Thanks for your cordial note with the questionnaire, Joe. . . . **Harry M. Myers**, 57 Harvard Ave., Brookline, Mass. 02146, also retired and headed for our reunion—Alumni Day fun, says the family firm of S.A. & H. Myers, Inc., is now a subsidiary of the Continental Manufacturing Company and he is still acting as manager and director of the subsidiary. . . . **Arnold R. Davis** makes his retirement home at 95 Orchard Lane, Berkeley Heights, N.J. 07922. Known to his associates at the American Cyanamid Company as "Mr. Rubber Chemicals," he is the subject of a unique tribute from that company, which we will review in a forthcoming issue. . . . **George Schnitzler**, who sports a new retirement home at 32 Gerry Rd., Chestnut Hill, Mass. 02167, says he has made his customary winter trip to warmer climes at his home at 1932 N. Michigan Ave., Miami Beach, Fla. 33139. . . . **Wallace T. Adams**, Secretary of the M.I.T. Club of Dayton, Ohio, gives his revised home address as 2606 Flemming Rd., Middletown, Ohio 45042. . . . **John M. Sherman** advises that mail should be addressed to his home at 32 Manning Rd., Waltham, Mass. 02154. . . . **Edward W. Noyes** is another commuter who reports leaving his Thompson, Pa., home to sojourn for the winter at 1410 S.E. 7th Ave., Pompano Beach, Fla. 33060. . . . **Lawrence W. Conant**, chairman of the downtown luncheon club of the M.I.T. Club of Washington, D.C., opened the monthly series with a talk by Deputy Director Albert J. Evans of the Aeronautical Division of N.A.S.A.'s Office of Advanced Research and Technology, on the subject of supersonic transport technology. . . . Mr. and Mrs. **Armand S. M. Kreeger** are active in the M.I.T. Club of the South in New Orleans, La., where he heads the Kreeger Store. . . .

Charles W. Richards, Vice-president of the M.I.T. Club of Central Pennsylvania, Harrisburg, Pa., and manager of the International Paper Company's Southern Kraft Division in York Haven, Pa., was host at a "doggie roast" at his home to members of the Club and all Technology students residing in the area, including entering freshmen. The outing was preceded by a guided tour of the paper plant. . . . Mr. and Mrs. **Raymond A. St. Laurent** attended a joint meeting of the M.I.T. Club of Hartford, Conn., and the M.I.T. Club of the Connecticut Valley, Springfield, Mass., to hear an address by our beloved Chairman **Jim Kilian**, '26, of the Corporation of M.I.T.

Flashback: 45 years ago, as reported in "The Tech" during the month of February, 1921, **Ed Delany** played left wing in a 2 to 1 win over the Amherst hockey team at the Braeburn Country Club carnival and later as rover in 7-man hockey with Harvard. **Herb Reinhard** had some of his music accepted for Tech Shoe '21; the late **Stuie Nixon** was the Show's general manager and **John G. Lee** his assistant. Coach **Frank Kanaly** picked **Ollie Bardes** and **Mich Bawden** as two members of the mile relay team which beat Harvard in the B.A.A. games; **Ted Spitz** and **Harry Junod** had been the other two members of this winning combination in the 1920 season. **Ray Snow** and the late **Carol Stone** ran on the two-mile team which defeated Dartmouth and came in second to Syracuse. **Frank Blewer**, **Sumner Hayward** and **Jack Kendall** were appointed to manage the Senior Class Day elections. Under the captaincy of **Jack Whipple**, the gym team walloped Harvard and tied Princeton; **Watts Humphrey** was on the squad. **Irv Jakobson's** Hoover Children's Relief dinner, served in army mess kits by girls from Boston colleges, was a huge financial success. **Irv**, as crew captain, also headed a drive to institute it as an official varsity sport; he had been instrumental in starting crew at M.I.T. as a member of the winning 8-oared shell in the extra event at our freshman Field Day. **Bill Knoepke** and **Merrill Youtz** were selected as members of the saxophone sextette formed by the M.I.T. Orchestra. The late **Attilio Canzanelli** won one bout and lost another in a fencing match with Harvard. President **Glen Fargo** of the T.C.A. inaugurated a new social department, whose first function was the presentation of a music recital. Technology tied Brooklyn Poly's boxing team when **Watts Humphrey** won the 175-pound match; Captain **Al Addicks** called for additional candidates for the team, which included **Armand Kreeger** and **Tom Proctor**. **Bob Barker** was appointed general chairman of an Inter-collegiate Conference on Undergraduate Government, to be held at the Institute in April; **Cac Clarke** was appointed in charge of publicity. The swimming team beat Rensselaer and Wesleyan, but lost to Amherst. Winning swimmers included **Judge Greene**, who won the 220 in all three meets; **Fritz Ferdinand** in the dive; the late **Charlie Palmer** and the late **Babe Colton** in the 50-yard dash and in the relays. The late **Bob Dolle**, T.E.N. advertising manager, attended a Chicago con-

vention of the leading college engineering journals; **Ray St. Laurent** proposed T.E.N. representation on the Institute Committee. The late **Ken Skardon**, President of the Civil Engineering Society, announced an address to be given by the chief engineer of the New York Board of Water Supply (when New York still had water!). The Loungeer impishly noted that the Boston Schoolmasters Association met at Steinert Hall and discussed abstruse topics—with an Einstein on the table.

The "National Fisherman and Maine Coast Fisherman" reported that the **Jakobson Shipyard, Inc.**, of Oyster Bay, N.Y. 11771, has started to build two ships for the U.S. Coast and Geodetic Survey. Named the "Rude" and the "Heck" in memory of former Survey captains, they will work together, trailing special dragging equipment between them to discover underwater hazards. **Irv Jakobson's** yard expects to complete them late this year. Jake's questionnaire says he'll be with us at Groton and Cambridge next June. . . . A grand letter from Catharine and **Harry Field** says, in part: "Thanks for your letter about **Jackson Kendall**. We had a visit with him via telephone while he was in Honolulu. **Saul Silverstein** passed through about a month ago and we had a nice visit while he absorbed sunshine at Wai-kiki. Had a dinner date last night with the **Dugald Jacksons**, but their ship was delayed, arriving at midnight and leaving four hours later—so we didn't get together. Life is quite different living in an apartment instead of in our old home. Much aloha." The retired Vice-president of the Hawaiian Electric Company now makes his home at 1519 Nuuanu Ave., King 161, Honolulu, Hawaii 96817. . . . **George A. Chutter**, who has retired from his Jersey City firm, engaged in the merchandising of electric furnaces, has written a welcome news letter about his change in retirement plans; he enclosed another long letter with his return of the questionnaire, saying he would now be able to attend both the Reunion and Alumni Day. Excerpts from both letters include: "Thank you for forwarding **Ralph Shaw's** Christmas card. This reminded me that I have not kept you informed of the post-retirement events of my life since last fall. We have sold our home in Portland, Conn., and have decided to retire to Cape Cod, in the town of Dennis, post office East Dennis, Mass. 02641. (Everybody goes to the post office for his mail, perhaps in a desire to have some form of daily social contact in what is a pretty quiet community.) We expect to build on Boulder Rd., come spring, the details being on the drawing board now. I don't look forward to this moving very much but it should not be as bad as going to Sun City, Calif., as we originally planned. Our change is due in no small way to the urging of many friends—**Sumner Hayward** and **Ralph Shaw** among them. From the Cape, I hope we will get to M.I.T. now and then and see some of our many New England friends and relatives. **A. Royal Wood** has retired as Vice-president of United Illuminating Company of Hartford, Conn.,

and is doing some consulting work for the company. He visited England and the Scandinavian countries last summer. **Ralph Shaw** has kept you well informed of his interesting adventures. Herewith is the questionnaire—I'm looking forward to our 45th; if we had moved west, I couldn't plan to attend. Had a fine phone conversation with **Helen** and **Ray St. Laurent**, who congratulated us on deciding to go to Cape Cod. I shall get mail at East Dennis post office from now on. We will be away for about six weeks during March, spending most of that time at Stanford Resort, Englewood, Fla. **Marion** and I wish you and **Maxine** happy holidays and a fine New Year." Many thanks, **George**; it's good to know you'll still be near when the Hexalphas gather!

Arthur W. Morse gives his home address as 55 River St., Stamford, Conn. 06906. . . . Dr. **Ivan F. Chambers** can be reached at 237 Colville Rd., Charlotte, N.C. 28207. . . . **Edward N. Tashian** receives his mail at 77 Boylston St., Waverlytown, Mass. 02172. . . . **Andrew Deane** has retired from U. S. Steel and moved from his former home in Pittsburgh to 1500 Bonita La., Royal Harbor, Naples, Fla. 33940. . . . **George Slover** has a new home at 1160 Kenesaw Ave., Knoxville, Tenn. 37919. . . . Questionnaires just received from **Mich Bawden**, **Al Wechsler** and **Ev Wilson** bear the good tidings that they all expect to attend our Reunion and Alumni Day. . . . A note of appreciation to the Class has been received from Mrs. Bartlett, for our expression of sympathy on the passing of Brigadier General **Boyd W. Bartlett**. . . . **Mrs. Harold D. Moore** has also written to thank the Class for sympathy extended to her. We note a correction to the article appearing in the November issue about **Spud**, who was the Worthington Pump and Machinery Company's consulting engineer in refrigeration for the eleven states comprising the western region, for a number of years prior to his retirement. . . . **Ralph M. Shaw's** questionnaire says he will attend the Reunion. A recent note from Rufe records: "Made-line and I took our niece, 13, and her mother to Europe on a 5000-mile auto trip last summer. Our daughter, **Mary**, and grandson, **Ralph**, have been with us since July. Major **Bob** had a heart attack in June, had to give up flying, has just been released from the hospital and is awaiting reassignment for light duty. Otherwise, we are all well and happy." The **Shaw's** Christmas card is beautifully illustrated with a colorful photo of **Made-line** and **Rufe** on the snow-covered top of the Jungfrau—taken during the trip last August.

Writing from his home at 6931 Chestnut Ave., Falls Church, Va. 22042, **Robert F. Miller** sends the following good news: "Our son and daughter-in-law gave **Helen** and me a great deal of pleasure last May 24, with the news of their first child, a boy named **Robert F. Miller III**. You know, when you have five girls and only one boy, it's an unforgettable thrill to have a grandson named after you. The family name will be carried on. This makes our fifth grandchild. Two of our daughters are still at home

and the youngest is finishing her second year at Mt. St. Aloysius College, Cresson, Pa., where she has done something her old man was never able to accomplish. She was elected president of the student council—and on the first ballot, too! . . . Thanks to **Ray St. Laurent**, we have several clippings from the "Hartford (Conn.) Courant," telling of the presentation of a silver tray to **John G. Lee** at a dinner of the board of regents of the University of Hartford. John has retired as chairman of the board, a post he has held since the university was chartered in 1957. He accepted a new assignment as chairman of the university's special planning committee, thus continuing a record of service to the institution which began 25 years ago, when he became a trustee of Hillyer College. He is continuing his business activity, since his retirement from United Aircraft as director of research, in consulting work for NASA. . . . **Edmund G. Farrand**, our super-active Class Agent and Estate Secretary, has a new opportunity to serve Technology as a member of the Committee on Class and Course Organizations, which is a part of the Alumni Association's long-range planning committee. Ed is also serving as Honorary Secretary of M.I.T. for the southern part of Georgia and the adjoining area of Alabama. . . . **Henry R. Kurth** is special gifts chairman for the Class of '21 in the Greater Boston area. He has sent us a warm personal tribute to the late Colonel **Albert L. Edson**, former manager of Boston's Logan International Airport, whose death we reported in last month's issue of the Review. In a long, illustrated article, the aviation editor of the Boston Traveler glowingly cites "the man who has left his mark on Boston" as the superintendent of the mudflat, cinder runway and hangars which constituted the Boston Municipal Airport in 1929, when aviation was still a questionable activity, and in being the man who built up the port to what it is today. . . . We gratefully acknowledge a uniquely utilitarian and entertaining volume as a Christmas present from our chief, who so skillfully guides and enhances the Technology Review. The revised issue of H. W. Fowler's *A Dictionary of Modern English Usage* is good general reading, provocative, puzzling in its amusing classification of material, frequently to be ignored in its more dogmatic treatises and a monument to "the class news columns (which) have given the editors of other parts of the magazine a great volume of sociological data for their guidance in making editorial decisions." Gee! Thanks!

It is with heavy heart that we record the passing on November 12, 1965, of **Zamby Paul Giddens** of 47 East 88th St., New York, N.Y. 10028, and extend our sincerest sympathy to his family on behalf of Zam's many friends in the Class of '21. Born on September 25, 1900, in Dallas, Texas, he attended local schools and was salutatorian of his high school class. He entered Technology in 1917 and was active on The Tech news staff and as night editor; as a member of the Technique Electoral Committee; grinds editor of Technique '21; and Beta Theta

Pi. During World War I, he was a private in the S.A.T.C. at M.I.T. He was graduated with us in Course XV. Zam carved notable careers in two major fields, oil and electronics. In the oil industry, where he got his start as a field engineer in Texas, he had been president of the Palmer Stendel Oil Company of Santa Barbara, Calif., and then president of Petrocarbon Chemicals, Inc., of Dallas. In electronics, he had been assistant to the President of the Servo Corporation of America and Executive Vice-president of a subsidiary, the Electronic Switch and Signal Company, before going to the Dynamics Corporation of America in 1959. He had been Vice-president of Dynamics for electronic aerospace and communications equipment, industrial and consumer products before becoming the Administrative Vice-president of the company. His memberships included the Petroleum Club and the Engineers Club of Dallas, the M.I.T. Club of New York, the Everglades Club of Palm Beach, Fla., and the Atlantic Beach Club in New York. He was active in Class affairs and served as head of the committee for our 25th anniversary gift to Technology. He is survived by his wife, the former Janet Taylor, a New York interior decorator; a brother, Roy Rea, and a sister, Mrs. Bonnie Bourne, both of Dallas. We are indebted to Yard Chittick '22 and to Sumner Hayward for aid in preparing these notes. Yard says: "Zam was a Beta—I roomed with him his senior year. While I saw him only occasionally over the years, he always remained the same happy, friendly person he was in school." Those of us in the Class who worked with Zam on The Tech will always recall the pleasure and privilege of our associations with a real friend and a conscientious and efficient administrator.

Only four months to go to our great 45th reunion and a most attractive Alumni Day. Get out those '21 reunion mailings and review the exceptional facilities at the Griswold Hotel and Country Club in Groton, Conn., for relaxation and sports, fun and comfort in an ideal vacation spot and in the company of staunch old friends who want you and your wife to join with them in more than four days of sheer pleasure. You won't want to miss the return to Cambridge to see the unbelievable changes in the outward appearance of the Institute's campus and the amazing educational and technical progress going on inside. Since last June alone, there is a new Vannevar Bush Materials Science and Engineering Building, a new Julius A. Stratton Student Center, the Grover M. Hermann Management and Social Science Building, a Center for Life Sciences Building, a new Pierce boathouse. Underway are a new building for a Center for Space Research, a 30-story tower in Kendall Square for graduate students and faculty and a new addition to McCormick Hall for women students. Tremendous advances in every field are bustin' out all over! Come see 'em! And do it in the company of your very best friends on earth. Join the happy group in Groton to make the combined trek back to Tech the more enjoyable for everyone. Send

back that questionnaire now and say you'll be with us—please send it back even if you can't possibly make the trip. —**Carole A. Clarke**, Secretary, 608 Union Lane, Brielle, N.J. 08730; **Edwin T. Steffian**, Assistant Secretary, c/o Edwin T. Steffian and Associates, Inc., 19 Temple Place, Boston, Mass. 02111; **Melvin R. Jenney**, Reunion Committee, 24 School Street, Boston, Mass. 02108.

'22

Winter greetings to you from good old snowless Buffalo. We can't seem to get the December temperature below 38 degrees and have had very little skiing even in the southern snow belt. The usual, unusual and unique Christmas Greetings have arrived from Carlys and **Frank Kurtz** of Delray Beach. They have recently travelled north to Rumson, west to Dearborn and south to Nashville to visit grandchildren and friends. They also report a flying trip to Medellin and Bogota; Quito, Trujillo and Lima with an exciting trip to Cuzco and Machu Picchu, the high point of Peru. In Delray, they are always most wonderful hosts to the members of the Class of '22.

Hasty judgment on the part of our Class President, **Parke Appel** caused him to blame your innocent Secretary for the November blackout along the eastern coast because of the generators installed at Niagara Falls. He must now admit that it was the tiny relay in Canada and not the "big generator in Buffalo." He tells of **Warren Ferguson** leaving for Florida but continuing as representative of our Class on the Alumni Council. His report also states that the attendance at our 45th Reunion is optimistic; 59 cards covering 108 classmates and wives indicate attendance, 25 are doubtful and 24 negative. It looks like the Wianno Club will certainly have its 125 capacity bulging. Parke is busy in the financial world and also as Church Deacon, town Republican Committee, Tech Fund Board and Alumni Council, Doves Foundation Play and "social drinking." . . . Louise and **Don Carpenter** hope to drop in at the Reunion and also visit the 50th Reunion at Andover. They will be taking the boat to Florida and the Bahamas in the spring. Here is an interesting quote from Don's letter: "After 15 years of attendance on the Executive Committee of M.I.T. I have retired. It has been most interesting, and since I shall continue as a Life Member of the Corporation, and a member of several Corporation and Alumni Association Committees, I expect still to be in pretty close touch. John Wulff's recognition is excellent. I'm so glad that our class took the step that it did in sponsoring a teacher. Apparently there is some tendency for other colleges to think in the same direction. I hope the desire to support two Professors will not dilute the adequate support of one outstanding one. I hope the second will be set up very much along the same lines as the first, i. e. to support teaching, to provide a 'hedge' for higher salaries called for by

coming inflation. You, I presume, know about the proposed 'Science Teaching Center' at M.I.T. This is a very comprehensive set up to improve teaching. It ties in exactly with our plans. I have discussed it with John Wulff who thinks it is good. Perhaps 1922 could become identified with this program to mutual advantage."

Henry S. Dimmick has retired from SKF Industries after 40 years of service. The family home at Cataumet has been with the Dimmicks on the same site since 1765 and in general on the Cape since 1639. Stu has looked up **George Dandrow** while at a New England TAPPI meeting at Chatham Bars. His street address at Cataumet, Mass., is 1167 County Road. . . . We are happy to add to the list of those attending our 45th **Yoshonori Chantani** and his wife from Tokyo, Japan. . . . The sympathy of our Class goes to the family of **John C. Moynihan** of Indian Orchard. John was born in Newburyport and lived in Indian Orchard for most of his life. He was a member of St. Matthew's Church, the Tuesday Club, Massachusetts Institute Valley and Elks Lodge 61. He was a veteran of World Wars I and II. He served with the 23rd Naval Construction Battalion of the United States Navy in Alaska.

Among the new addresses received are those of **Willard Purinton**, Augusta, Me.; **Rudolph Blatter**, Arlington, Va.; **George Maling**, Ridley Park, Pa.; **Carl Shattuck**, Dover, N. J.; **Reginald S. Hall**, Cedar Grove, N. J.; **G. Dewey Godard**, still at Marblehead and **Joseph Greenblatt**, Ft. Lauderdale, Fla. As you read these February notes, your Secretary will be packing for an Australian trip so that increasing shortness of notes accompanies increasing shortness of breath in his rush to get away. Happy winter vacations to you all!—**Whitworth Ferguson**, Secretary, 333 Ellicott St., Buffalo, New York, 14203; **Oscar Horovitz**, Assistant Secretary, 33 Island St., Boston 19, Mass.

'23

Herbert L. Hayden writes, "Just a line to let you know that Katie and I are on a three and one half month trip to South America. We left October 1 and expect to be home January 15. We are having a fine time. Have been to Caracas and Merida in Venezuela, Trinidad, Paramaribo, Dutch Guiana; Cayenne, French Guiana, Belem, Brasilia, Rio, Sao Paulo and Iguassu Falls in Brazil, Asuncion, Paraguay; Montevideo in Uruguay and now in Buenos Aires. Finally caught up with **Jose Bertino** and we got together for a nice chat and some tea at the Navy Club. He has been retired for a few years and left yesterday (November 12) to spend a few months in his home town a couple of hundred miles away. His doctor won't let him eat and drink everything but he looks pretty good. He remembers **Dean John E. Burchard** very well and he thought a lot of **Bernie (Bernard E.) Proctor**. He wanted to be remembered to **Pete (James A.) Pennypacker** and **Ray**

(**Clarence H.) Chaisson**. It was nice to see him. Through **Jose, Luis Igartua** got in touch with me. He has been fine to us. He took us and his charming wife to dinner one night and they had us over to his home for cocktails where we met his fine family of two daughters and one son."

At the annual meeting of The Supreme Council held in Cleveland, Ohio, on September 27-29, **Bertrand A. McKittrick** received his 33rd and last degree of the Ancient Accepted Scottish Rite of Free Masonry and honorary membership in the Supreme Council. The actual conferring of the degree is a very impressive occasion with around 1500 to 2000 in attendance—all in white tie and tails, as it is full dress.

The Journal of the Patent Office Society for September, 1965, shows that Professor **Richard H. Frazier** was a panel speaker at the International Assembly Commemorating the 175th Anniversary of the U.S. Patent System 1790-1965 on October 18, 1965. . . . Following an interesting article and picture in Southern Engineering for October, 1965, the following information is furnished about the author: **Hyman J. Verner** is a mechanical engineer, the author of numerous technical papers and holds numerous patents in the copper industry. His experience includes 18 years in a copper refinery where his duties included the design and construction of capital equipment, four years as a Supervisor of Development Engineering Department of a major chemical industry, and 14 years as Chief Engineer of a Stainless Steel Rolling Mill. His duties include the procurement of rolling mill equipment, the design and installation of specialized equipment, supervision of the construction of warehousing and material handling facilities, and the complete supervision of all plant services and maintenance within the mill.

Looking Ahead for September, 1965, reports that president and owner of Voltarc Tubes, Inc., of Fairfield, Conn., **Miles Pennybacker**, has been a member of the NPA business committee since 1955. Prior to this he was a member of the NPA Committee of New England from 1950 to 1955. This committee was responsible for a 738-page study, The Economic State of New England. Prior to his formation of the Voltarc Company in 1945, he was plant manager of Rainbow Light, Inc., and later vice-president of Machlett Laboratories, Inc. During the war years he assumed the responsibility for the construction and operation of a facility which made high power radar tubes for the Atomic Energy Commission. The project was financed by the Defense Plant Corporation. Under the Roosevelt administration, he was chairman of the Committee on Financial Aid to Small Enterprise of the Council for Industrial Coordination. He served on the Business Advisory Committee of the President's Council of Economic Advisors from 1946 through 1952. He was a member of the NRA Code Authority for the electric sign industry, and is past chairman of the Norwalk Chapter of the American Red Cross and of the Norwalk Chapter of the Connecticut Society of Mental Hygiene. He is a past president of

the New Council of American Business, Inc. He is now a director of the Fluorescent Lighting Association, the National Electric Sign Association, and the Management Council of Southwestern Connecticut. In 1960, under the auspices of the International Cooperation Administration, Mr. Pennybacker conducted a seminar in Buenos Aires for Argentine business leaders. He is a lecturer in New York University's Executive Management Program, and frequently addresses business groups on advanced management techniques. He is the author of "The Challenge of Research and Development, a Workable Company Program," and "Smaller Size—Competitive Hindrance or Help?" both published by the American Management Association.

There is an interesting article in Investment Dealer's Digest for October 18, 1965, by **Alfred Edward Perlman**, President, New York Central System on "Research and Progress In Communications Systems on Railroads." Following the article it states that he began his career with the Northern Pacific Railway as a draftsman, but that after 12 months behind a drawing board he went to work as a track laborer. He had decided that the only way to get to the top was to start at the bottom. He became a roadmaster in 1927 and in 1931 he attended Harvard School of Business Administration. When he left Northern Pacific Railway in 1934, he was assistant to the Vice-president of operations. His next position was as a consultant with the Railway division of the Reconstruction Finance Corporation. It then lists the various positions he held until he became President of the New York Central System in 1954. This has been included in class notes before so won't be repeated here. However, another long article in the Worcester (Mass.) Telegram of November 2, 1965, by **Richard Cunningham**, describes what the railroads are planning for high speed transportation for the future. That article states that **Alfred E. Perlman** told the New York Society of Security Analysts that the railroads are about to become a growth industry once again. He has transformed his own railroad into a research center, with extensive experimental laboratories at Cleveland.

Dr. Julius A. Stratton, M.I.T.'s President, retires next June 30. The Ford Foundation has announced his election as chairman of its board of trustees, effective January 1. He will continue, however, to devote full time to his duties at M.I.T. until the end of this academic year. Dr. Stratton became acting president in 1957 and President in 1959. "Under Dr. Stratton's leadership M.I.T. has been advancing on all fronts," Chairman **James R. Killian, Jr.**, '26, of the M.I.T. Corporation told the press. "It has introduced major innovations in teaching and curriculum development, grown in enrollment, scope, and faculty strength, and carried through a great building program which has transformed the landscape. Later there will be appropriate occasions for the M.I.T. community to celebrate in full these achievements of his and to express its gratitude and esteem. He has been an unusually strong leader, bringing

to our institution exceptional poise, unity, and sense of direction. We salute the Ford Foundation for its good fortune . . . and wish him another period of achievement." Dr. Stratton has been a trustee of the Ford Foundation since 1955. "The student is the essential reason for our being," President Stratton told the audience at the dedication of the new Student Center last October 9. Dr. Kilian announced the naming of the building in honor of President Stratton, and William A. Byrn, Jr., '66, Undergraduate Association President, gave Dr. Stratton a plaque bearing the dedicatory inscription. It noted his "abiding concern for the students of M.I.T." The Near East Foundation has announced Dr. Stratton as a sponsor of the Golden Anniversary of the organization, which is America's oldest private organization in technical assistance and rural development.

A nice letter of November 16, 1965, from Norman Weiss reports that, "Mary and I have run into some of my classmates in the last few months, and can only wish that this good fortune may continue. In July we spent two days in the beautiful new home of John C. O'Flaherty, Course III, and Eileen in Denver. We had two delightful, chock-full days with John and Eileen and their seven children. Later, on our way home through Taos, N.M., we had the surprising good fortune to run into the Gilbert Whiteheads, Course III. I hadn't seen Gilbert since 1923, though I had kept up with his career. They are living in Prescott, Ariz. Then last week we had a visit from Palmer C. Putnam, Course XII, who visited ASARCO's Mission and Silver Bell operations, and had dinner with us last night. It was a very enjoyable occasion, since it had been 42 years since we had left M.I.T. All is well with us and I hope with you also." . . . Howard F. Russell, our Vice-president, writes, "Our daughter-in-law presented us with our first grandchild, a boy, the latter part of July. Then in September, I decided that instead of taking a fall trip I would go into a hospital to get corrected a hernia situation that had begun to develop. Then three weeks after the operation I got some sort of an intestinal bug that was worse than the operation. So between the two of them they took about 15 pounds off my carcass. In the meantime I have been trying to keep the church in Amherst from burning down and am still engaged in that project. Ernesto B. Ledesma from Manila finally made his trip to the USA last summer with his wife and a group of his countrymen and women. They had to go to Washington on some project first but he phoned me from New York. Then they all made a junket to various countries in Europe, finally ending up in Boston early in September. We had invited them up here but as their time was short we drove down and met them at M.I.T. on a Saturday. We tried to tour the Institute but found most of the doors locked. However we were able to get into some of the buildings and give Ernesto an idea of what is going on. He wished to be remembered to all classmates. Ernesto is vice-president of the Manila Electric Company. Ernesto got back to Manila safely

in spite of running into a typhoon at Hong Kong."

Notification but no details have been received of the death of **Whitney C. Huntington**, 708 Florida Ave., Urbana, Ill. on March 31, 1965. . . . The Alumni Office has advised of the following changes of address: **Henry F. Culver**, 1105 Chanticleer Lane, Hinsdale, Ill. 60521; **Nathaniel H. Frank**, 101 Monmouth St., Brookline, Mass. 02146; **Angelos A. Spiliotis**, 682 Concord Ave., Belmont, Mass. 02178; **Archibald Williams, Jr.**, 529 Jerome Ave., Bristol, Conn. 06011; **Irwin W. Alcorn**, 3519 Drummond, Houston, Texas 70025; **Douglas H. Alexander**, 118 Palmers Hill Road, Stamford, Conn. 06902; **Russell W. Conant**, 3774 Effingham Place, Hollywood, Calif. 90027; **Thomas B. Drew**, Revolutionary Road, Temple, N.H. 03084; **Richard H. Frazier**, 7 Summit Ave., Winchester, Mass. 01890; **Charles H. Grandgent**, 43 Burgee Drive, No. Mystic Islands, Tuckerton, N.J. 08087; **Robert L. Hershey**, Box H, Kennett Square, Pa. 19348; **Miles Pennybacker**, 102 Linwood Ave., Fairfield, Conn. 06433; **Edward C. Rue**, 668 Newton St., Chestnut Hill, Mass. 02167; **Joseph H. Scholtz, Jr.**, Scholtz & Co., 10 Wall St., New York, N.Y. 10005; **G. Wilbur Seymour**, 6924-32d St. N.W. Washington, D.C. 20015; **William C. Gray**, 50 Sparhawk St., Amesbury, Mass. 01913; **Robert H. Henderson**, 42 Stoneridge Road, Summit, N.J. 07901; **Robert E. Hendrie**, 91 Walnut St., Braintree, Mass. 02184; **James V. O'Connor**, 5530 No. Washington Blvd., Arlington, Va. 22205.—**Forrest F. Lange**, Secretary, 1196 Woodbury Ave., Portsmouth, N.H. 03801; **Bertrand A. McKittrick**, Assistant Secretary, 78 Fletcher St., Lowell, Mass. 01852

'24

After last month's dearth of news, this time we have plenty. It comes from California, New Mexico, and Mauritius, among other places. And it's certainly varied.

Let's start with **Ellis O. Jones, Jr.**, of Santa Rosa, Calif. After 32 years with Ethyl Corporation in sales, customer service, purchasing, and traffic, Ollie retired in late 1964. Not one to sit around and let his arteries harden, he immediately joined the Department of the Interior as its representative in the Office of Oil and Gas in the eight western continental states plus Alaska and Hawaii. "My aim was to avoid the retirement pasture and keep busy. This I have accomplished with a vengeance." So far he's visited Alaska, Hawaii is just coming up, and of course he's been up and down the west coast with regularity. The Joneses have three children and 10 grandchildren, but the intriguing bit is that there are currently four Ellis O. Jones living. Ellis III is now the U. S. Consul in Khorramshahr, Iran.

Charles O. Duevel, Jr., is back home in Connecticut now, but he spent four months of last year in England. Seems King-Seeley, Thermos Division, of which

he is vice-president, built a new glass factory in England. It went into production in January 1965. In July it burned to the ground. Local people said it would take nine months to rebuild, so Cy was sent over to expedite matters. He did it in three and a half months. One reason for the speed, no doubt, was the somewhat primitive accommodations in the small town where he and Mary stayed. It boasted a hotel with 18 rooms and one bath. "As Mary said, it would have been fun roughing it like that 40 years ago, but not today." This month Cy retires.

In all these years this is the first time we've heard from **Walter C. Thee**. Walter was a Course II man and a career army officer. He retired some years ago as a Colonel. Now comes a card from the island of Mauritius in the Indian Ocean, 250 miles east of Madagascar. The Thees got there after an extended trip through Africa. They saw Roman ruins in North Africa, and plenty of game in Nairobi, among other things. "Mauritius is rapidly becoming the world's most densely populated country, with a present density of 1,000 inhabitants per acre." That seems to give it the title already, unless Walter made a bit of an error and meant per square mile. But surely they have the biggest hotel. He says, "Port Louis is the capital of Mauritius. Our hotel is in the S.E. part. It is about 40 miles long and 30 miles wide." It must be a Hilton.

We've told you before about the travelling Ifelds' sojourn in the South Pacific and the island of Kauai, Hawaii. Last winter they went in a different direction. After two months in the Canary Islands, during which they bought a VW for exploring purposes, they boarded the Santa Maria (the same ship that was hijacked in the Caribbean some years ago), and headed for the continent. There they toured Portugal, Spain, Southern France, including Monaco and the Riviera, then to Paris and back to Montreal, from whence they VW'd all the way home to New Mexico. And after they read this column they'll probably head for the Mauritius-Hilton next.

Back to prosaic New York, but to an important item of news. The J. Henry Schroder Banking Corporation announced in December that **B. Alden Cushman** had been elected a Senior Vice-president. Cushman has been with Schroder since 1929, and had previously been a vice-president. . . . And from New Jersey comes a very nice letter from Helen Winger, enclosing a check in memory of Ed to be added to our class Memorial Fund. She is moving once again, but at the moment her destination is not quite clear. It will be either Northern New Jersey to be near daughter Barbara, or to Asheville, N.C., where her sister and daughter live. . . . Two more presumed retirees, at least judging by their address changes. **Harry R. Ferguson** has left Pennsylvania for the balmy clime of Key Biscayne, Miami. . . . And **Theron P. Bailey** has headed in the other direction, from Louisville to Hampstead, N.H. Hope T. P. hasn't lost his touch with the snow shovel.

One last bit of news. **George Lindsay** died suddenly on November 1 of a heart attack. Their oldest son, Robert, had just

entered the Navy, and their youngest, Brian, is three years old. George retired as Director of Engineering of the Skinner Engine Company in 1963, and they moved from Erie to Louisville to be near Mrs. Lindsay's family. "He enjoyed retirement so much and wished he had done it long ago." The sympathies of the entire class go to Mrs. Lindsay and the boys.—**Henry B. Kane**, Secretary, Rm. E19-439, M.I.T., Cambridge, Mass. 02139.

'25

Ben Groenewold in a recent letter sent a newspaper article about **John W. Sibert, Jr.** It should be of considerable interest to all members of the Class, and it is quoted in part as follows:

"In August of 1962 President John F. Kennedy said in a speech dedicating the Oahe dam in South Dakota:

"This dam and many more like it are as essential to the expansion and growth of the American economy as any measure that Congress is now considering, and . . . as essential to our national strength and security as any military alliance or missile complex."

"In this same speech Kennedy paid tribute to area Army engineer John Sibert 'for shaving \$28 million off the estimated cost figured six years ago,' and added 'We're going to take him back to Washington and put him in charge of the whole operation.'"

"The man about whom President Kennedy was talking was John W. Sibert, Jr., who is now a resident of Siesta Isles on Siesta Key—and who, incidentally, believes Sarasota is the nicest place to live in Florida."

"Sibert's career with the Army Corps of Engineers spanned 33 years, both in and out of uniform, and began during the depression years when skyscraper construction, for which he had been trained, went into limbo. 'People were not building large buildings in the depression years,' he said, 'so I transferred into large water structures and dams.'"

"Large mass—bigness—has been a kind of theme throughout Sibert's life, starting with his skyscraper training at Massachusetts Institute of Technology in the 1920's and culminating with construction of the Oahe dam, the largest rolled-earth fill dam in the world at the time it was built."

"A curiosity of Sibert's career is the fact that on his last two dam projects, the Garrison dam in North Dakota and the Oahe (pronounced like Hawaii) dam in South Dakota, he spent a total of 18½ years, or more than half of his professional career with the Army Corps of Engineers."

Ben also indicated that John had spoken to the M.I.T. Club of Southwest Florida, of which Ben is the president. He gave an illustrated talk on the construction of the Oahe Dam.

An interesting letter has also been received from **Merida B. Crum** in which he points out that since retiring during the 50's, he and his wife have traveled considerably but until last August had never been in our 49th State. He described his

trip and the following is quoted from his letter:

"After flying to Seattle, we stopped at the Buchart-Garden en route to Vancouver, from where we began the Inside Passage trip to Haines. Then we went by coach to Anchorage via hard-hit (by the March 1964 quake) Valdez. Anchorage now appears to be fully recovered from the quake and is a modern, progressive city. We went on by train to Fairbanks, stopping en route for a visit to Mt. McKinley National Park to see the moose and caribou."

"We flew from Fairbanks to Nome, to Kotzebue, to Barrow, and then all the way back to Florida. Fairbanks and these three Eskimo villages must be seen to be appreciated. The permafrost and extreme winter temperatures (6 weeks at Fairbanks last winter that the thermometer never rose above -35° F.) make modern city living a very difficult if not impossible attainment. For instance, up until now, Nome has never had tap water nor sewage (not even septic tanks). But lines are now being installed in steam tunnels and the continuously circulating water will leave the pumping station at almost boiling temperature. In Barrow, even the natural gas lines are necessarily above ground (none underground) and are laid on 55 gal. steel drums all over the village—odd but not very scenic."

"Although we should not have been surprised, we were at seeing no trees above the Arctic Circle—just flat frozen tundra pock-marked by numerous ponds or lakes as far as we could see from the plane."

"Inflation is evident everywhere in the State, with half a grapefruit (not even Florida quality at that) costing \$1.00, and an average quality steak dinner \$7.50. What appeared to be about an \$18,000 home (in Florida) cost \$45,000 in Ketchikan and \$74,000 in Nome."

The 1925 class notes could be made more interesting if some of you who have not been in touch with your Secretary for some time could follow Merida's example and drop a short note in the mail.—**F. L. Foster**, Secretary, Room E19-702, M.I.T., Cambridge, Mass. 02139

'26

The card says February notes are due on or before December 15 so even though we wished you a Merry Christmas a couple of months ago it hasn't quite arrived in Pigeon Cove. We haven't moved into the new '26 Class Notes headquarters but this issue is the first to emanate from there. The living room has a few chairs, a couple of lamps, a small rug and my small divan facing the window wall overlooking the gray, overcast North Atlantic. Other than the surf beating on the rocks below and an occasional hungry sea gull gliding past there is little action out there. It's distracting nonetheless but I'll try to get on with these notes. Recognizing that as you read there remain but four months to reunion time I will from now on be devoting more time to that subject than our

usual class notes items. **Austin Kelly** is getting into high gear or more specifically into overdrive (he is always in high gear!) on our class gift. He phoned from New York just before we came out to Pigeon Cove to say that our class President, **Dave Shepard**, has agreed to spend whatever time is necessary visiting classmates in behalf of the class gift. A member of our class who owns a private plane is making it available to Dave to assist in this effort. Austin's call was to enlist your Secretary for Dave's swing thru New England. Dave will be well along with his tour by the time you read these notes and obviously our intelligence isn't good enough to know of every classmate who needs a little nudging or coaxing or explaining of our purposes. If you know of anyone who has been missed or if you are one who needs additional information please contact your secretary at the address at end of notes or I. Austin Kelly, III, at 60 E. 42nd St., New York, N.Y. (telephone OXford 7-5423) and the fire brigade will be right out. Your reunion committee will be getting news to you about the reunion but we would like to cover a few angles that you will want to be fitting into your plans. While our reunion will be held at the Belmont in Harwichport on the Cape, Friday night through Sunday noon (June 12), Alumni Day takes place on campus Monday, June 13. The hard core of 20 or 25 classmates who attend every year know about Alumni Day but for the large group who will be back for our most important of reunions this is an opportunity to catch up on the changes at Tech since graduation. If you haven't been back for a few years you will feel like Rip Van Winkle—I do and I go back every year! At Alumni Day you are given an opportunity to see and hear about M.I.T.'s present position in the changing world and its role in training future leaders in these fields. To make it easier for our class to attend, dormitory rooms will be made available to classmates and their wives Sunday and Monday nights, June 12 and 13, and breakfasts Monday and Tuesday mornings. Sunday evening Ruth and I are planning to have the class come to Pigeon Cove for cocktails and to see for themselves some of the distractions that make it difficult to concentrate on class notes. This morning the scene has remained unchanged since we started two hours ago—not a lobster boat has ventured from the harbor, no trawlers have passed off shore—not even a lone tanker on the horizon, but we get distracted just looking for them. Also Ruth has come over from the "Fo' Castle" and started to shine copper, try curtains at the windows, etc., because to quote, "If all of those classmates of yours are coming down here next June things must be ship shape for them." We do look forward to your visit and will be enlisting Tom Pitre (he doesn't know it yet) who will doubtless be in residence in our "Fo' Castle" by then. We don't know yet how we will get you down here and back but will call upon our Reunion Committee for transportation assistance so there will be no problem we assure you. To get back to Alumni Day—the morning and afternoon schedules will feature lecture dem-

onstrations about current programs and trends at M.I.T. Luncheon under the tent in the Great Court, then in late afternoon cocktails and the Alumni Banquet. Following the banquet a program, so far undisclosed, in the Kresge Auditorium. We have just given you the highlights; the mails will bring more detail but we did want to get to you with the importance of including Alumni Day in your reunion plans. Before we sign off we must include today's Pigeon Cove incident. Nothing out there on the ocean, which remains gray and interesting but uneventful. This incident arrived via the front door on the other side of the house in the form of one of Rockport's leading artists—one of the few who can write N.A. after his name. He dropped by to see the progress on the house. Upon reaching the living room he was fascinated by a painting I had placed on the mantel over the fireplace—went up and touched it. He was deeply impressed that I should own one since they are very valuable. This is the second time a recognized artist has made the same mistake with my "painting" and I kept quiet like a mouse. To do otherwise would have been an insult. The truth is that my "painting" is an exceptionally good, large, 25" x 30" reproduction that I picked up in New York for \$30 and put in an expensive frame. I don't know what the moral is but it does show that at Pigeon Cove one can never tell from which direction the interesting event will come. We don't know from whence it will come when you are here; we expect you will bring it with you. Meanwhile you must arrange your schedules for reunion and Alumni Day and above all, don't forget that Austin Kelly is looking for your assistance. Don't wait for his call if you can help his program in any way. Cheerio until we talk with you again in March.—**George W. Smith, E. I. DuPont de Nemours & Co., Inc., 140 Federal St., Boston, Mass.**

'27

Glenn Jackson has written to **Howard Ferguson** and to **Bob Bonnar**, and both have sent his letters along to me. The following interesting notes are taken from both letters: "Betty and I love Iran—a good opening sentence—and feel the next two years of residence will be most educational and pleasant. We are living in Tehran, in a small hotel of about 30 rooms, all of which are occupied by Americans, some of them being women and children refugees from the war zone of Pakistan. The Iranians are wonderfully cooperative and pleasant people. The food is good. Farsi, the language, will take a couple of years to learn and seven or more to write. So I will content myself with the essential words and phrases, as most educated Iranians speak English or French. This city of two million has 8000 taxis and generates the worst traffic imaginable. There are certain rules which I have not learned but one of them seems similar to American classboat racing, namely, if you can get your front fender in the path of another car, you have the

right-of-way. Traffic lights are being installed and drivers are gradually learning to use them. My job is with United Merchants and Manufacturers (see N.Y. Stock Exchange), who have a contract with the Iranian government to improve their textile industry by a survey of as many of their textile spinning, weaving and finishing plants as is possible in the next two years. The study will also include the merchandising of the products. I am coordinator of a team of seven men who have been working here a year ahead of my arrival, so the job is considerably simplified by the experience they have already acquired. We answer to the Ministry of Economics and are part of the government-financed Industrial Management Institute. Each of us has a counterpart who has recently graduated from a textile or technical institution in the U.S. or England, and whom we are training in modern textile techniques and plant management. After recommendations are made on each plant, we usually follow up the changes systematically thereafter, but most often we have to pitch right in with the foremen to train them as well . . . This government, under the Shah, is taking giant steps and making them work. New schools, hospitals, industrial plants, housing developments, and roads are being completed, and much more in the planning stage . . . The weather is still beautiful in Tehran, 70 most of the day and 45 at night, with only an occasional sprinkle about twice a month. But the mountains a few miles away to the north—lying between us and the Caspian Sea and Russia—are showing heavy snow on their summits . . . You are handed tea at every greeting and you must drink it even if you had five cups that A.M. My office hours are 7 A.M. to 1:30 P.M. and you are through for the day. More Persian executives see the sun come up than all the rest of their counterparts throughout the world . . . Betty and I had a wonderful two weeks in Italy, with a few days in Beirut, on the way over. I will regretfully miss the 40th Reunion as I do not expect to leave here much before November '67. If any '27 men go through here, I'd like to meet them at the plane and show them the town." After this description, Glenn, I'd certainly like to be on the visitors' list. And keep on writing of what you see.

Bob Bonnar, in writing, also advised of **Ed Dunn's** retirement in December. Allied Chemical and Dye whom he joined in 1931, gave a party for him at the Downtown Athletic Club in New York to honor his years of service. Before Allied, Ed was with the U.S. Tariff Commission and with Dupont Ammonia Corporation. One thing I remember specifically about Ed is the big help he was in putting together the 25th Reunion Book. In retirement, Ed wants mainly to travel, but he has been convinced by Allied and others to do some short-term consulting work.

Howard Ferguson, in his letter, says my retirement from Shell hasn't made things any easier for him in Sohio. We had similar jobs in commercial sales management. . . . **Joe Burley** was in New York with his wife and attended special sessions for community leaders sponsored

by the Foreign Policy Association at the U.N.

Belated word of the death of Professor **Loyst C. Caverley** in June 1964 has been received. Professor Caverley received his masters degree in 1927 in electrical engineering. He had been, to our knowledge, at the University of Minnesota for 20 years and became a professor of electrical engineering.—**J. S. Harris, Secretary, Masons Island, Mystic, Conn. 06355**

'28

From Milan, Italy, **Herman Krantz** recently wrote to **Charlie Worthen**: "Thank you for your letter of November 9. This business of being on the committee seems much too easy, but your kind words have sold me; so my card is enclosed for you to mail there (thus avoiding any problem of postage, etc.). Seriously I have not the faintest hope of being able to attend the 40th reunion, but I do wish you well with your Drive. For your personal information, I have gotten busier and busier since you were here. I am now president and managing director of Stigler-Otis, and also president of the American Chamber of Commerce in Italy. A lot of work is involved, some satisfaction too, but not too much else."

Another note from Charlie in the form of a clipping from the December 13, 1965, issue of *Electronic News* proves that **John Stack** doesn't need a publicity firm to keep in the news. The clipping states, "John Stack, vice-president, engineering, Fairchild Hiller Corp., Washington, D. C., has been awarded an honorary fellowship in the Royal Aeronautical Society of Great Britain. The award, which is the highest the society can bestow on a non-British subject, cites Mr. Stack's 'contributions to aeronautics.' This is the second time Mr. Stack has been honored by the society, a distinction shared by only two other Americans: The late Glenn Curtiss and Elmer Sperry." And a note from the Alumni office informs your unworthy secretary that the above mentioned John Stack now lives in Wormley Creek Drive, Yorktown, Va., having moved there from Huntington, N. Y.

We are happy to present a letter we received last summer from **Ken Mackenzie**: "It is now late on a Friday afternoon, my desk is all cleaned up and I have just finished reading the June Class Notes so I am taking your hint and giving another report of myself. I am still managing the Paper Mills Division of the Eastman Kodak Company. Having just rounded 60, I am giving serious consideration to retirement, which I can do now under our Company's retirement plan.

"We have been continuing our rather extensive traveling during the last two years. In the middle of April, 1964, we sailed from New York on the Italian Line to Genoa, Italy, where I rented a car and we drove up through northern Italy and Switzerland to Bavaria, where I photographed the old walled cities and the beautiful interiors of a number of Bavarian Rococo cathedrals. We returned to Genoa by way of Baden-Baden, Basil,

Bern, Montreaux and Milan, coming back to New York on the Italian Line. This was a five-weeks trip.

"This year we decided to do Mexico and left Rochester the latter part of March by car, taking a week to drive to Laredo, Texas. We then drove 2,500 miles around Mexico visiting Monterrey, Saltillo, San Luis Potosi, San Juan Del Rio, Mexico City, Cuernavaca, Taxco, Acapulco, Puebla and Oaxaca, where I photographed the many Toltec, Aztec and Mayan ruins. For the benefit of any of my classmates who are thinking of taking a trip through Mexico, I would recommend that they do not go in April. It is the end of the dry season, very hot, even on the high plateau and very badly burned out. The countryside, except for a few spots of irrigation, is completely brown with nothing growing but cacti. I guess this is all for now."

Jim Donovan says that a large number of classmates have responded to his appeal to join the committee of the whole class and help with our 40th reunion and fund-raising effort. He goes on to say, "To each who has already responded, we say many thanks—we need you to be with us. To those who have not signed their cards and returned them, please do so. The work is not going to be arduous. In fact, if you say the only person you want to solicit is yourself, we'll welcome you on that basis—do send in the card—do join the committee—do participate."

Here's an abstract of a letter Jim recently received from **George Chatfield**, long-time class Secretary and great and good friend of Ralph Jope's: "Hi Jim! First, let me say that both because of Ralph and M.I.T. (and members of '28) I want to be of assistance on the Fund. Three years ago (on November 1, 1962) I started my 'retirement' from the advertising agency business. Now, three years later I find these developments—added a new 50,000 watt power to WFGM-FM and changed all to WBNE-FM—changed programming—much legal work with FCC and with new hi-power gates FM transmitter—all new cartridge tape recorders and three mobile remote automobile transmitters for remote broadcasts. Purchased three county expansion areas and existing Muzak business therein covering Manchester, Nashua and Keene, N. H., and Brattleboro, Bellows Falls in Vermont with all points in between. Last March purchased weekly newspaper of 37,000 circulation. Extended new building to include 'Publishing House' which also includes 'Broadcast House' and have started 'Creative Services, Inc.' which is a small agency type service for a few of our clients who are pleased to pay for it."

"Find myself active as 'Community Service' Chairman for Rotary, Chairman of the Chamber of Commerce Committee on parking in key areas, etc. Result—less take home than in New York—far less available free time than in New York—but things are exciting, interesting and very time consuming. It's a much busier and much less tense life than National Advertising! Thank the good Lord for this! For all of that, Jim, I'm interested—Ralph's memory is close to me—and I'll do what I can."

And finally, a note from Jim includes a paragraph from **Charlie Richheimer**. We quote, "As you know, it's always a pleasure to work with you, so here's my card enclosed, but I thought I'd best advise you of my changed situation. I lost my wife Booty late in August so now am in the process of selling my Jacksonville home and am moving to Tavernier—about 70 miles south of Miami on the Keys. My daughter Bitsie is teaching kindergarten in the public schools of Atlanta."

It is also our sad duty to report the death of **Dr. George W. Rigby** of Wilmington, Delaware, who passed away on July 27, 1965; of **Eric Hartmann**, 226 Center St., Milton, Mass., who died on Nov. 4, 1965; and **Walter K. Oser** of Baltimore, Maryland, who died Dec. 13, 1962. A news clipping from the Boston Globe tells us P. E. Hartmann, 61, of Norwell was a teacher of modern language at Milton Academy since 1932. Born in Germany, he came to the United States in 1922; and after graduating from M.I.T. with our class, he earned a master's degree in language at Harvard before joining the Milton Academy faculty in 1932. He left a wife, Mary, a son, William D. of Santiago, Chile, and two daughters.—**Hermon S. Swartz**, Construction Publishing Co., Inc., 27 Muzey St., Lexington, Mass.

'29

At the time of writing for this February issue, your class secretary is recuperating after a four-week stay in the hospital. Everything seems to be fine now and with a few more weeks of convalescence, hope to be back on the job by the time this issue reaches you. In the meantime, with the help of my secretary (which, incidentally, has happened many times before) and thanks to all the news items contained in the questionnaires, we will continue with the information we have on classmates from Connecticut.

Adrian Clark of Bethlehem is vice-president and editor (retired), and director and editorial consultant, of D. Van Nostrand Company. He says, "Traveled U. S. and Canada widely. Have visited many colleges in search for authors. Attended second U. N. Conference (Geneva) on peaceful uses of atomic energy (1958). Visited short time in Austria, Holland, England, Scotland—some health problems in '60 and '61 surmounted—greetings and regards to the silent '29-ers." . . . **Richard Oppen**, of Wolcott, has a lifelong career with U. S. Rubber, where he is now sales manager of reclaimed rubber, heavy chemicals and rubber labels, in the Chemical Division. His 1790 house, containing antiques that he has made a hobby of collecting, is often included in old house tours. He is curator of the Wolcott Historical Society, and also finds time for membership in the Rubber Division of the American Chemical Society and the presidency of the YMCA. . . . **Donald Hersey**, East Hartford, has been in aeronautics from M.I.T.

days, from Flight Training School in Texas through 35 years with Pratt & Whitney Aircraft Division UAC, now as job supervisor, Design Services. He has been on three NACA subcommittees during and after WW II; is a member of ASME and IAS. Among varied hobbies he lists painting and woodworking, and, as does **Adrian Clark**, golf and birdwatching. . . . **J. Gordon Carr** of Greenwich has his own business, an architectural office of 50 people, beginning when he "opened own office in 1938 on strength of some 1939 World's Fair jobs won in competitions. Worked for Quartermaster General during the war. My clients are mainly from business and industry. Projects in many parts of country, Canada, Mexico, the Caribbean—one for the government in the Arctic. My hobby of painting has given me great relaxation and satisfaction. Exhibited in many exhibits throughout the country. Pictures are shown in Grand Central Art Gallery, New York, and I have been recently selected to accompany Navy on NATO maneuvers to paint scenes and impressions for the history of the Navy." . . . **Robert Riley** of Middlebury went to Army Air Corps Flying School in Texas after graduation, and after many more years in aeronautics and a bit of other work, went into "Engineered Sinterings & Plastics, Inc., 1953—present. Five of us started (this) new company, doing well now. Still take only winter vacations—skiing. Enjoy living in country—four children (with, we count, eight college degrees among them), five grandchildren—great life!" . . . **Anthony Staden**, of South Kent, is executive editor of the Encyclopedia of Chemical Technology. This he says "has been my life work since 1946. I am now doing the second edition. When I get to the end I will retire, with immense enthusiasm, to my house in South Kent, Conn., which will then be called 'Post-Zirconium.'" This work is done for John Wiley & Sons, prior to which employment Tony was with Imperial Chemical Industries and in "various work in U.S. including teaching at St. Johns (100 Great Books) Annapolis." Besides this, he has written books: *Insect Invaders*, *Science Is a Sacred Cow*, and *More Sacred Cows*, *Little Heresies in America and Elsewhere*. He lists as hobbies playing and writing music for the recorder ("I don't mean a tape recorder"), and playing Ultima. He asks, "Any other Ultima players in our class?"

Via a Christmas card from the Meads, we are sorry to hear that Ed Farmer's wife, Clara, is also on the sick list. They reside in Waban, Mass.

Our questionnaires came back in a gratifying flurry, and as we are spacing them out you may find items that have been superseded by later events. Please do write in and bring us up to date—**John P. Rich**, Secretary, P.O. Box 503, Nashua, N. H.

'30

Among the trends that can be detected in the news concerning our classmates, there is now a perhaps predictable trend

toward retirement. This month we have three retirees to report on: **Ralph Appleton, Henry (Pat) Pattison and Ross Wood.** Ralph retired from the real estate business in Columbus, Ohio. At last report, he and Dorothy had completed a six-month trip around the world and were planning another extended trip. Their son Fred graduated from Kenyon several years ago and now works for the State of Ohio. Daughter Dorothy is a Wellesley graduate working in Boston. . . . Pat retired from Benton & Bowles Inc. earlier this year ('65). However, he continues to be active at the N. Y. Alumni Center and is currently General Chairman of the Center. . . . Ross retired from Raytheon where he had been designing special purpose vacuum tubes and is now living in Wilton, N. H. . . . **Sam Zisman** is a planning consultant (City, State and Regional) with headquarters in San Antonio, Texas. He apparently specializes in planning University campuses and other school and college facilities, both in the U. S. and abroad. For example, he recently did an entirely new campus for Skidmore College at Saratoga, N. Y. He does considerable travelling and not infrequently meets former students who were in his classes during the five years he taught Architecture and Planning at M.I.T. in the thirties. . . . **Denis Agar** is a consulting mining engineer with headquarters in Bourlamaque, Quebec. His principal clients are Rio Tinto Canadian Exploration Ltd., Rio Algom Mines, Ltd., and Naganta Mining & Development Co. Ltd. He is active in local school and church affairs and includes curling and painting among his hobbies. The Agars' two sons David and Heimo are at Lakefield Preparatory School, Lakefield, Ontario. . . . **Charley Abbott** is now executive vice-president of N. E. Gas & Electric System, as well as Trustee of the Cambridgeport Savings Bank, Corporator of the Lexington Savings Bank, Director of the Cambridge Chamber of Commerce, and member of the Lexington Town Meeting and Board of Appeals. The Abbotts' son William is scheduled to graduate from Harvard Law School next spring and daughter Suzanne is in the class of '67 at Wheaton. . . . By the time these notes appear, **Howie Gardner** will have completed his return move to the West Coast from the Institute of Paper Chemistry in Appleton, Wis. He has accepted the posts of Professor of Chemical Engineering and Professor of Pulp and Paper Technology in the College of Forestry at University of Washington—**Gordon K. Lister**, Secretary, 530 Fifth Avenue, New York 36, N. Y.

—the Wianno Club on Cape Cod. The last meeting of your Reunion Committee was scheduled for November 9 and even though the great Northeastern Blackout occurred that night, several brave souls turned up at the meeting place. The next meeting will be held on January 13, 1966 . . . and by the time these notes are published all of you will have heard again from the Committee directly. . . . **Bill Jacobs** must be going international. I saw one of his Jet Spray Coolers in a railroad restaurant in London the other day. . . . **Ralph Davis** has been doing a fine job keeping yours truly posted on the progress of the Reunion Committee and a nice note from **Fred Elser** says they survived the storm that hit Palm Springs, Calif., recently. The sad news of Dr. **Frederick Coonan's** death on November 30, 1961, has just been received. Only one new address has been reported since the last notes—**Charles Schroeder** now lives at 260 Rutland Ave., Teaneck, N.J. 07666—**Edwin S. Worden**, Secretary, 35 Minute Man Hill, Westport, Conn.; **Gordon A. Speedie**, Assistant Secretary, 90 Falmouth Road, Arlington, Mass.

'33

Folks: So now another month rolls around, and have y'all noticed how the rate of rolling around seems to be getting out of hand? The older we get, the faster the time seems to pass, no?

First a short discussion on a recent letter by yours T. to classmates who do not receive the Review. A month or so ago, this letter went out to these anti social so and so's, and, also went a copy of the "Technology Review." My sole object in this mailing was to attempt to increase my fan club; too many classmates do not receive the Review, hence I find that I am writing to myself when I make mention of these, as they are not readers. Fred Lehmann has sent me the list of those who received the letter, and the copy of the Review, and warns that all these lists are subject to some error; some names are included who do already receive the Review, such as those few who are making payments on the Second Century Fund pledges. There may be others. I found one name on this list of Fred's, the owner of which has been deceased for more than a few years. It was not my intention to try and reach this group. Now, with this introduction, I have a bit of a request: will any and all men and women who received this letter, who do receive the Review regularly, please drop me a line and say so, as I have every wish to get such names off of the black list. This black list is to be of those only, who are thoughtless enough, or indigent enough, or who are just plain lazy enough, to refuse to keep in touch with their classmates, and with the Institute. I know that there are many of the fellows who, earlier, could not afford to join the Alumni Association, or give to the Alumni Fund, and who now can but haven't. The letter was aimed at this group, mainly, and, please do not forget that my real

aims were selfish; I wished, and still wish, to enlarge the fan club, and folks, I will.

Now comes **Cal Mohr** again, with a nice letter which arrived a day or so after the last closing. **Mal Mayer**, it seems, has just returned from a business trip to South America, in connection with his brewing consulting business, Schwarz Labs. Aside from consulting, Mal's company does some manufacturing of items used in the brewing industry. Mal's travels take him all over, and his many friends, also from all over, came to visit the hospitality suite at the recent meeting of the Master Brewers. Too bad that Mal has never learned to write (me). It seems that Mal attended a meeting of the M.I.T. Center to hear addresses by Institute Professors on present knowledge of the brain. Mal saw **Dayt Clewell**, but no one else from our class. Cal, these meetings are well attended, and by all classes, including ours. It does not follow that every class is well represented at every meeting, as I myself find that all subjects are not equally interesting, to me, at least. I have seen six or seven classmates at one of these meetings. Again, Mal, please make it a point to stop in to see us at Exeter next summer. We would sure enjoy having you. Cal comments briefly on the Class Officers' meeting at the Institute, held early in the fall. I attended last year, but was unable to attend this year on account of illness. This three-day meeting is open to all Class Officers, and also to members of the various committees of Alumni who work, either nationally, or regionally, on Alumni activities, such as the Alumni Educational Council. These fellows do the field work necessary to steer prospective students to the Institute. All of these men are appointed by the Alumni Association. Class Officers are elected. Cal and I sort of hoped to be able to get together at the time of the International Livestock Show, but two phone calls failed to get a reply from him.

With no other personal mail, we now pass on to the press, which is also a bit skimpy. First we have a four-page press release by Rensselaer Polytech, on our own Dr. **V. Lawrence Parsegian**. I must confess that I can't remember knowing the good doctor when we were students. He took his Bachelors Degree in Physics when we did, and then went on and took his Doctorate at New York University. He is at present Rensselaer Professor at the school of the same name, and the reason for the press release was that he has accepted an invitation to serve on the Committee on Science and Technology of the Chamber of Commerce of the United States. Doctor Parsegian, prior to this, was on the U.S. Chamber's Committee on the uses in Commerce of Atomic Energy, and before that served on their Advisory Committee on Atomic Energy. One of the objectives of the Committee on Science and Technology is to encourage private ownership of such plants as those producing uranium, now owned by the Federal Government. Dr. Parsegian was formerly Dean of the School of Engineering, and Professor of Nuclear Engineering at Rensselaer. It is interesting to note that Dr. Parsegian is the Rensselaer Professor at his school. This chair was

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Your 35 Year Reunion Committee is hard at work . . . and as of today (December 15) 77 of us have indicated that they plan to attend and another 62 have said they will attend if they can. These early signs point to a "full house" by Reunion time. Don't forget the date—the weekend of June 10, 1966—and the place

established in 1961 and he is the first holder, in recognition of his interdisciplinary interests, and distinction in teaching administration and in research.

Another item is in the periodical, "Industrial Water Engineering," and concerns Dr. **Athelstan Spilhaus**, who took his Masters at the time we took our S.B. He had his Bachelors from the University of Capetown, South Africa. He is at present Dean of the School of Technology at Minnesota University. The article concerns Dr. Spilhaus' connection with Oceanography. It would be far beyond the scope of these articles to try to paraphrase the long article, and, in any event, much of the subject matter was covered in a meeting at the M.I.T. Center last Spring. I do not recall whether or not Dr. Spilhaus attended that meeting. If he had, no doubt I would have met him, and I sure wish I could have. For those interested, "Industrial Water Engineering," is located at 114 East 32nd Street, New York, N.Y. 10016, and, the issue in question was August 1965. Incidentally, you have only to look back a year or so in your Review file, to find further information on Dr. Spilhaus. I wrote him up at some length. . . . In the January issue, I wrote at some length on the untimely passing, via auto accident, of **Joe Gora**, of Canton, Mass. From the Quincy, Mass., Patriot Ledger: Following graduation in 1933, Joe attended Princeton, after winning a scholarship. Joe was noted as a national authority on store designing, and was also active in designing store buildings. He was an architect with the U. S. Army Engineers from 1951 until his death. It is apparent that he led a very, very, full life.

With no obituaries this time, other than a second mention of the above, only one personal letter, and three press clips, we have reached a new low for interest in the affairs of classmates. Readers of the Review are urged to note the length of class notes, from some of the classes earlier than our own. Last issue the notes of one class ran to over two full printed pages in the Review. Fellows and gals, we should be ashamed—**Warren Henderson**, Box 14, Fort Rock Farm, Exeter, N. H.

34

Through some friends of **Walt McKay**, who visited the **Bachenstoss** family in Beirut in November, we learn through Walt that all is well with Hank and Nicole. . . . **Carl Wilson** came back from a three week business trip through France, Italy, Spain and Austria—Carl tells us that **Frank Baxter** is developing a new shopping center in Worcester, Mass., on farm land owned by his family—Carl also passed on an interesting letter from **Rodolfo Gonzalez Garza** of Monterrey, Mexico, who was registered in '34 as **Rodolfo J. Gonzalez**. "We always keep M.I.T. in mind, since there are over 30 Alumni in town, and we have a meeting once in awhile. Although we now have a good technical school in Monterrey, which was modeled after M.I.T., those that can

afford it, always send their sons there, when they are studious and capable. I have two nephews at M.I.T. now. My activity is in the export field. I am the general export manager of the **Vidriera Glass Company**. We have pioneered exports of finished products from Mexico, something unknown in Latin America. More than half of our exports are to the United States."

Phil Kron passed along an early '65 letter from **Ted Rimbach**, 604 Lee Avenue, Webster Groves, Mo. 63119. One of Ted's boys, Don, served with the Navy off Vietnam; after completing a 4-year stretch he entered Glendale Junior College, Glendale, Calif. He was planning to transfer to Southwest Missouri State College at a later date. Ted's older boy Richard left Rolla School of Mines to accept a sales position with G. F. Heath Company of St. Louis. Ted's daughter Jean attends Cornell College in Mt. Vernon, Iowa. "The high point of the year was the formation of Ted's new firm, **Rimbach & Associates, Inc.**, with offices in Brentwood, a mere two miles from home. Ted and Allan Brennecke found their interests were diverging from the others in Lane Machinery Company so a new venture was started beginning August 1. Oliver vanderBerg of Webster Groves joined with Allan and Ted to form the new firm. Most of the old principals stayed with them. The pumping of water and sewage plus water conditioning, sewage and waste treatment and industrial process equipment will be the fields of greatest activity."

Len Shapiro writes, "What is new is the fact that I have retired from active work in industry, and am busy taking life easy. I guess I beat most of you fellows to it, and can report that it is a little difficult at first, but one gets accustomed to it after awhile if one doesn't fight it too hard. Actually, there hardly seems enough time to keep up with all the periodicals, letter writing, increased reading program, TV viewing—to say nothing of N. Y. Times crossword puzzles and double-crostics and mathematical puzzles which I enjoy working. In the new professional directories, I have classified myself as 'Consultant', and would indeed be happy to consult in the field of polymers, surfactants and specialties in cases where it does not conflict with present commitments. I attended the Alumni dinner. There were a number of 'old faithful' alumni and others who are probably no less faithful, but just happen to live further away. **Johnny Westfall** and his wife were there. John still runs his reinforced plastics business, specializing in machine parts, tanks, etc. Professor and Mrs. **Wali Wrigley** were at our table. Walt's principle work lately has been as Educational Director of the M.I.T. Instrumentation Lab., which has grown from his theoretical thesis work with Professor Draper on Inertial Navigation, and is now an amazing complex of at least four buildings scattered around Tech and Hanscom Field. I have also been in close touch with **Irv Kusnitz** and his wife Rose who had to miss Alumni Day because they were at Cornell attending the graduation of their son Paul. Paul is continuing for

an advanced degree, while their younger son **Ralph** is a junior at Harvard, interested in Math and Physics. Irv is still living in Marblehead and has been at Ionics, Inc., for the past five years or so. Ionics has just moved from their Cambridge headquarters to larger quarters in Watertown, and Irv has been very busy with purchasing, maintenance and coordination of the transfer operation. Ionics, you may recall, is engaged in manufacture of desalinization units for purification of brackish water by electrodialysis through semipermeable synthetic resin membranes as well as DC power units and various government research contracts. But in spite of all the demands of his job at Ionics, Irv has somehow found time to expand one of his hobbies and is a partner in the Woodlawn Sport Shop of Randolph, Mass., and sells hunting or target guns, rifles, shotguns and accessories. So you fellows with guns to buy, sell or swap, just give Irv a buzz for the best professional advice. We have also had very interesting visits by **Paul** and **Jeanette Lappe**, and **Hal** and **Tema Bellinson**. Paul Lappe is the production executive partner in an enterprise called (if I remember correctly) **AD-AID**. They take care of packaging and mailing of catalogs, gifts, and other items which large companies often send out to considerable-sized mailing lists. His charming wife, **Jeannette**, is still an important cog in Newark educational system, and was collaborating on a book on this subject. **Hal Bellinson** has had an interesting time of it lately. He is still with Cluett, Peabody at Troy, N. Y., where he also lives. He has abandoned the quality control lab, however, and is now in charge of Operation Research for Cluett. Hal had a close encounter with that old man with the scythe last year, but they finally diagnosed his rare malady as 'sprue' just in the nick of time, and with only a slight dietary change he has made a miraculous recovery and looks better than I had ever seen him. Hal and Tema went on an interesting vacation to Europe this summer, behind the Iron Curtain, to Moscow and some of the satellite countries. A couple of interesting details we have heard of their trip: 'Tourists' travel in the back of the passenger planes where there are no windows—and, they found that all the waiters performed 'L'addition' with abaci. Hal was not permitted to photograph them in the act of using these instruments. (I guess it must be a military secret)."

Ernie Massa and **Jeanette** spent 10 days on Kauai Island, 100 miles west of Honolulu as guests of Hawaii's Governor Burns at an engineering conference on "Oceanography and Anti-Submarine Warfare." They visited sections of this island on which the picture "South Pacific" was made. . . .

Larry Stein was recently elected President of Hingham's Friends of Conservation which has been set up to keep the town's streams and forests intact. Larry completed six years with the town's finance committee, serving as Chairman for the last two years. He reports that **Charlie Lucke's** daughter Jane and her husband are sailing around the world—

they reached Australia from Sausalito, Calif. and are next due in Greece! Charlie's daughter originally sailed for several summers as an infant on the "Kitty" with her father, Larry Stein, John Westfall and Al Rogowski. Larry spent last summer in Holland visiting the Kema electrical testing lab on business and studying the Dutch methods for reclaiming land for pleasure—he recommends the good food at less than \$2 per meal and the excellent hotel accommodations at \$6 per night. Larry reports that **Paul Wing's** son Paul III is getting his M.S. in Industrial Engineering at U. of Calif., Berkeley.

Robert C. Gunness who took his M.S. with us in '34 is the new president of Standard Oil of Indiana, one of the 10 largest industrial firms in the U.S. with worldwide assets of over \$3 billion. He is a life member of the M.I.T. Corporation.

... **Bud Snyder** writes that he is teaching navigation with the local power squadron and taking a graduate course at N.Y.U. He sailed his boat "as far as Martha's Vineyard last August and back to Connecticut. It was interesting but felt it was a lot of open water for a small boat."

Roger Coffey tells us "**Leo A. Carten**, Course II, 2314 Valley Drive, Alexandria, Va., has a daughter Ann who graduated from Carnegie Tech this past spring and who entered Harvard Business School this fall as one of six girls they admitted into their sacred halls. She is interested in merchandising. I believe this is the first group of girls admitted. Leo has long been with the Ordnance Department of the Army, and I believe is now civilian head of Engineering of the guided missile branch."

Bea and I recently had dinner on the 52nd floor of Boston's new Prudential Center. We recommend this for an exciting view of M.I.T.—**Norman B. Krim**, Secretary, 15 Fox Lane, Newton Center, Mass. 02159. Co-Secretaries: **Kendrick H. Lippitt**, 3782 Putter Drive, Chula Vista, Calif.; **Charles M. Parker**, 3 William Street, Norwalk, Conn.; **W. Olmstead Wright**, 1003 Howard Street, Wheaton, Ill.

'35

My pleas for letters are producing results: during the past month I have received several newsy letters. Keep 'em coming!

Walter Stockmayer in his letter tells of a weekend which he spent with **Otto Zwanzig** in Quebec. Otto is with Price Brothers, one of the leading Canadian paper companies. Stocky continues and writes, "Those who recall Otto as business manager of the Combined Musical Clubs at Tech will be pleased that he has kept this up, being now a Director (forgive me, Otto, if that isn't just the right word!) of the Quebec Symphony Orchestra. He had previously done similar things in Vancouver, too. Almost forgot! Strolling along the boardwalk in Atlantic City in September at the American Chemical Society meeting, I encountered none other

than **Howard Mason**. He is professor of Biochemistry in the University of Oregon Medical School in Portland." Stocky himself continues to achieve notably. Herewith is an excerpt from a recent news item: "Professor Walter H. Stockmayer, chairman of the department of Chemistry at Dartmouth College, has been named as recipient of the \$1,500 American Chemical Society Award in Polymer Chemistry, sponsored by the Witco Chemical Company, Inc., Foundation of New York City."

Bill Abromowitz is about to become a father-in-law and writes proudly, "... my eldest daughter Susan, now 21, is being married on December 26 to Bernard Slosberg, Course X, Class of 1962. At least my daughters appreciate the value of an M.I.T. education." ... **Hal Bemis** continues to be eminently active in community affairs and at long last has confessed, "Quite truthfully, I have completely run out of time to do many of the things I would prefer, one of them being keeping in touch and close contact with members of our class." In addition to running his very successful machine business (Jennings Machine Corporation, Philadelphia), Hal is a very active member of the Lower Merion Township Board of Commissioners and is campaign general manager for the 1966 fund raising campaign of the American Cancer Society in Philadelphia and Montgomery Counties. He is also chairman of the board of governors of The Philadelphia Chamber of Commerce. ... **Boyd Brownell** has been named general manager of the Electro-Motive Division of General Motors, La Grange, Ill. Boyd has been with GM since graduation! ... **Clark Nichols** who lives in Oreland, Penn., is manager of the systems engineering division of Leeds & Northrup Company. He has been with this concern for 30 years!

On November 19, we had a so-called steering committee meeting of Boston Area members of the class. Present were **Bill Abramowitz**, **Bob Anderson**, **Randy Antonsen**, **Irv Banquer**, **Howard Beck**, **Leo Beckwith**, **Dave Cobb**, **Art Cohen**, **Nix Dangel**, **Al Fletcher**, **Ellis Flink**, **Bob Forster**, **Art Marquardt**, **Al Mowatt** and **Jack Taplin**. I can't recall what we steered, but we had a most congenial evening and decided to try to have two meetings a year. Each man who attended promised to bring to the next meeting one class member besides himself.

Last but not least, **Allan Mowatt** writes: "I had dinner on December 2 with **Ned Collins** and **Charles Debes** at the Sheraton O'Hare Inn, Chicago, and we had a fine evening. In fact, it got so foggy that Charles spent the night with me rather than return the 90 miles to Rockford that night. We really re-made the world and reminisced galore! As a result of Ned's enthusiastic interest in the class and his efforts in getting Chicago '35ers together, I have appointed him Vice-president of the Class for the Chicago area under the authority given me by the class at the business meeting in Chatham last June. Hallelujah! He accepted with pleasure! Charles Debes has 3 daughters: Cheryl (18) now at Northwestern, Marybrent (16) in high school

and a 1st violinist and the Concert Mistress for the Chicago Youth Symphony Orchestra, and Robin (13) in Junior High School, interested in dramatics as her mother has been."—**Irving S. Banquer**, Co-secretary, 20 Gordon Road, Waban, Mass. 02168; Regional Secretaries: **Arthur C. Marquardt, Jr.**, 178 Mt. Vernon St., Dedham, Mass. 02026; **John H. Colby**, Rt. #1, Box 91A, Islamorada, Fla. 33036; **Edward Loewenstein**, 444 Cornwallis Drive, Greensboro, N. C. 27408.

'36

In last month's notes I incorrectly reported the date of Alumni Day. It is scheduled for Monday, June 13, and will mark the close of our 30th reunion. ... It's also hard to know whether to include items of national and international note which will be thoroughly "old hat" by the time you read these notes. I doubt if there is a reader who is not aware that our classmate **Bob Woodward** was a recipient of a Nobel prize in Chemistry for his brilliant achievements in creating organic materials in the laboratory and his "meritorious contribution to the art of organic synthesis." His syntheses include chlorophyll, cholesterol, cortisone, lysergic acid reserpine, strychnine, quinine, etc. ad infinitum. Certainly we all rejoice in this significant recognition of his accomplishments. ... Another accomplishment of note is the birth of our newest class baby, a son Richard Bruce, whose parents are the **Ben Coopersteins**, on October 27. ... **John Beattie** who studied with us after attending Lowell Tech is research director of Claremont Flock Company in Claremont, N. H. He has moved to N. H. from Greenwood, S. C. ... I regret to report the death of **Vernon V. Halversen** of Skokie, Ill. over two years ago on January 15, 1964. ... **Elliot Cullati** has moved to the country from Brighton. His address is 49 Possum Road, Weston, Mass. 02193. ... **Brockway McMillan** has settled in Summit, N. J. at 6 Hawthorne Place and **Larry Sharpe's** address is P.O. Box 5, Milford, N. H. 63055.—**Alice H. Kimball**, Secretary, 20 Everett Avenue, Winchester, Mass. 01890.

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Al Schroeder, a member of the Technical Staff of RCA Laboratories at the David Sarnoff Research Center in Princeton, N.J., recently received the 1965 David Sarnoff Gold Medal Award of the Society of Motion Picture and Television Engineers in recognition of his work in the field of color television. The award, given for meritorious achievement in television engineering, was presented to Mr. Schroeder during the SMPTE 98th Semi-annual Technical Conference in Montreal, Canada. Schroeder has been associated with the Radio Corporation of America since 1937, when he joined the RCA Victor Company in Camden, N.J.

as a television research engineer. Since 1942 he has been a member of the staff of RCA Laboratories where he has specialized in research on television cameras, receivers, and terminal equipment for both black-and-white and color television systems. He has received several RCA Laboratories Achievement Awards for his work in the television field, and has had a number of patents issued to him relating to the development of a color television system and color kinescope recording. Al is a Fellow of the Institute of Electrical and Electronic Engineers and a member of Sigma Xi and the American Association for the Advancement of Science.

Major General **James McCormack** U.S.A.F. (Ret.), Vice-president of M.I.T., will succeed Leo D. Welch as chairman and chief executive officer of Communications Satellite Corporation. . . . **George DeArment**, our class estate secretary, reports that his company has changed its name to Channellock, Inc. George is president of the company, which manufactures hand tools, mainly "Channellock" pliers. . . . **Ed Corea** has been transferred from supervisor of shipbuilding at Quincy to Boston Naval Shipyard. His daughter, Virginia, has graduated from the University of Massachusetts, School of Nursing, and is now a Navy Nurse, Ensign, stationed at Charlestown Naval Shipyard. . . . **Rutherford Harris** is regional vice-president of the Mutual Boiler and Machinery Insurance Company, in Cleveland, Ohio. His daughter, Sally, graduated from Bryn Mawr and is now at the University of Ankara, Turkey on a Fulbright Scholarship. His son, Fred, is a junior at Shaker Heights High School. —**Robert H. Thorson**, Secretary, 506 Riverside Ave., Medford, Mass.; Professor **Curtiss Powell**, Assistant Secretary, Room 5-325, M.I.T., Cambridge, Mass.; **Jerome Salny**, Assistant Secretary, Egbert Hill, Morristown, N. J.

clue to a recent promotion, for Hal is described as manager, Systems Engineering and Analysis, at General Electric's Advanced Technology Laboratories, at Schenectady. Congratulations, Hal, both on the book and on the promotion. Here's a clue, too, to family devotion: the flyleaf is inscribed: "To Erma Ruth, Pete, Tom, and Andy, for their help and for their patience."—**Oswald Stewart**, Secretary, 3395 Green Meadow Circle, Bethlehem, Pa., 18017.

Washington 5, D.C.; Dr. **Samuel A. Goldblith**, Assistant Secretary, Department of Food Technology, M.I.T., Cambridge, Mass.

'41

To those of you who have not yet decided as to whether your 25th Reunion plans also include Alumni Day at the Institute, the following copy of a letter from Robert W. Forster, Chairman for Class Reunions 1966 Alumni Day Committee, to **John H. Macleod, Jr.**, 25th Reunion Committee Chairman, is included herewith as follows: "Dear Mr. Macleod: I am writing you on behalf of the 1966 Alumni Day Committee to express my appreciation and to thank you for integrating your Reunion plans with Alumni Day at Tech. For the past several years the Alumni Association and the Alumni Day Committee have been actively promoting a joint program with the following long range purposes: 1) For M.I.T. to show the greatest strength through the years ahead, she must have a strong, active, and loyal Alumni, who are attuned to the M.I.T. of today—her progress, her needs, and her objectives. Campus visitation by alumni with the purpose of exposure to M.I.T.'s present position in the changing world is essential if our alumni are best to understand and help Tech in the future. 2) Alumni Day is designed to show Alumni the changes at Tech since the attending Alumni graduated. 3) It is intended to give Alumni a solid conception of Tech's role in the scientific and engineering developments of today, and in the training of future leaders in these fields. The alumni Association feels it also must participate in the overall effort to make the 'back to Tech for Alumni Day' movement a success. As I believe you know, the Institute is offering at the request of the Alumni Day Committee the following: 1) Dormitory rooms free of charge to those Reunion Classes, such as yours, who make Alumni Day and Reunion an integrated event. This is available to Alumni and Wives who attend both their Reunion and Alumni Day. This applies to primarily Sunday and Monday nights, June 12th and 13th, 1966, and to other days under certain special arrangements with the Alumni Office. 2) Breakfast on the M.I.T. campus Monday and Tuesday mornings, free of charge, under the same conditions as above. 3) Arrangements are being made with the M.I.T. Faculty Club to provide cocktails and dinner Sunday evening on a Dutch-treat basis for a flat fee of approximately \$6.00 per person. 4) In addition to the above the Alumni Day Committee is arranging to show a movie on Sunday evening for those returning Alumni and guests who will be on campus. The movie will be Jacques Costeau's 'World Without Sun' also a short film on his most recent experiences if available. The Alumni Day program for Monday is fast taking shape. The morning and afternoon programs will feature lecture demonstrations about current events and trends at MIT. We hope

'40

Dickey Chappelle, who was internationally known as a war correspondent and photographer, was fatally wounded in Vietnam when she stepped on a land mine on November 4, 1965. Many of you will remember Mrs. Chappelle (Georgette Meyer) as a member of Course XVI during the years 1936-1937. She left Tech to begin her career in journalism, making her debut covering a flood in Worcester. For much of her life she was an independent writer and photographer on overseas assignments. At the time of her death, she was on a news and picture assignment for the National Observer and WOR-RKO General Radio. Previously, she had worked in Vietnam for the National Geographic Magazine. She also was a war correspondent during World War II and Korea and covered the Hungarian Revolt in 1956, as well as United States Marine action in Lebanon and the Dominican Republic. Among her other exploits were the covering of the Algerian Rebellion from the guerilla side and marching through the Cuban jungle with Fidel Castro during his guerilla war against Batista.

W. H. Krome George has moved up to the position of Vice-president in charge of science for the Aluminum Company of America. He started with Alcoa in 1942 as a chemical engineer and later became senior staff accountant, chief cost accountant, administrative assistant in the Controls Division and then manager of the Department of Economic Analysis prior to his present appointment. Krome is married to the former Jean Murphy and they have three sons, Doyle, Robert and Peter. . . . **Richmond Wilson** is now a senior engineering associate at Corning Glass Works where he has held various positions associated with glass technology and process operations since graduating from Tech in 1940. . . . **David Brown**, who is senior vice-president for Research and Development for Halcon International, Inc., has been named a member of the Manhattan College Council on Engineering Affairs. Before joining Halcon, David was vice-president of Scientific Design and Development Company. . . . **Ionics, Inc.**, prexied by our own **Russ Haden**, was one of the prominent exhibitors at the First International Water Desalination Symposium held in Washington, D. C. on October 3-8, 1965.—**Alvin Gutttag**, Secretary, Cushman, Darby & Cushman, American Security Bldg.,

'39

It's too early to have received any Christmas cards yet (December 10) from which some news can be generally picked up, and it's really too late to express holiday greetings, so I'll simply settle for hoping you are having a good winter! And here's one New Year's prediction, that **Fred Cooke** will be sending his usual year-end letter of greetings. In advance of that item, here's his new foreign address, as reported by the Alumni Office: **Puns-vinken Park 14, The Hague, Netherlands.**

Last week I caught this one from the acquisition list of the Bethlehem Steel Corporation main library: "Systems Engineering Tools," published by John Wiley & Sons, 1965, and written by **Harold Chestnut, VI-A.** Hal's new book is a 646-pager, and is the first of a projected Wiley series on Systems Engineering and Analysis of which Hal is the editor. This first book develops the mathematics and technical skills required in the analysis and synthesis of engineering systems in the utility, industrial, and military fields. And the book's dust jacket gives a

for example that you will actually be able to participate in computer programming and some of the very popular freshman seminars will be demonstrated. Luncheon in the Great Court is of course a high point. Then in late afternoon, cocktails and the Alumni Banquet. Following this will be a new and we believe interesting evening program in Kresge Auditorium. At a later date, I will write you concerning details for on-campus housing and dining. I will also inform you in more detail of the schedule for Alumni Day and of the coordination we would like to encourage with Alumni Day publicity and registration. . . . Sincerely yours, Robert W. Forster."

Douglas Watson has been made a member of the building committee for the Brookfield High School addition, Brookfield, Conn. Doug is an engineering major in structural and construction work. He is designing engineer for a new facility for Capital Machine and Switch Company, Danbury, Conn., for its new building on Route 6. He is associated with Lester Geiss in development. He lives on Music Hill, Brookfield.

Dr. Howard O. McMahon, President of Arthur D. Little, Inc., appeared in the November 1965 issue of "The Reflector" for his work in developing the Collins-ADL Helium Cryostat, for which work he received the Edward Longstreth medal. He has also carried out basic studies on the molecular structure of glass and on high temperature thermal radiation phenomena in glass for which work he was awarded the Frank Forrest Award by the American Ceramics Society.—**Walter J. Kreske**, Secretary, 53 State Street, Boston, Mass., **Henry Avery**, Assistant Secretary, 169 Mohawk Drive, Pittsburgh, Pa.; **Everett R. Ackerson**, Assistant Secretary, 16 Vernon Street, South Braintree, Mass.

'43

I received two great letters during the past two weeks, which I pass along to you. First, from **Ted Lindsay**, a marine consultant with offices at 160 Broadway in New York; "Your name keeps coming up in my mail from Tech, we were once next-door neighbors, the 25th reunion activity is moving, and—well—it's just time I wrote you! Seems to me we were in Senior House together in 1942-43?, with Jim Harno, Theriault, etc? And I saw you once in Philadelphia somewhere in there. Jim Hoey mentions you are compiling vital statistics, and I know you have been doing a marvelous job keeping the class together . . . from following the Review. Here is some more for your probably voluminous file: My course was XIII-C Marine Transportation. Before, during and just after the War, I sailed on merchant ships as engineer. Ended as Chief Engineer and Lieut. Cmdr., Maritime Service. The Chief's license is still in effect, in which I take inordinate pride. Professor Chapman's boys in XIII-C were few in number each year, but quite large as a group. In my opinion, up until

his retirement about 10 years ago, we may have been actually the closest knit course . . . that is, keeping more in touch week-to-week after graduation than any other from the Institute. In fact, we had a weekly luncheon group until jobs became too busy, here in New York's shipping section on lower Broadway. In 1938, a marine club called The Maritime Associates was formed by Woody Woodman, Henry Humphreys, Ed Svikis, and others from XIII-C. I think it is quite a record to be able to say this Club has been meeting monthly ever since, excluding 1942-5.

"I've seen almost all the living graduates together at one spot, in honor of the Professor, at least twice over the years. Can any other course from Tech make this claim? Perhaps you could enter this into the lists for dispute in the Review. After the War, I was assistant to David Wright, President of Lake Tankers Corporation, domestic tug, tanker and barge operators for Shell Oil. Dave was about Class '38, XIII-C. We also had Woodman on board, and later Furman, both XIII-C. After nine years, I became an independent shipping consultant and then marine traffic and operations manager for Allied Chemicals Corporation. To prove my point earlier, without going to extremes, I should have mentioned **Jim Harno** of '43, XIII-C, whom you must remember from Senior House, married my sister towards the end of the war, during sub duty. He returned to Tech to teach under Professor Chapman in XIII-C. He then took her to Liberia and Nigeria in west Africa, for Socony, now Texaco (I mean took her to Africa and went to work for the latter (!). They love it there and have somewhat of a record for in-residence . . . also, I understand, for entertaining visiting firemen from the States, etc. Should any of the Class pass through Lagos, drop in. Jim was here a few days ago, returning from his six-months biennial leave home.

"Dorothy Lee Cole of Virginia and Long Island was gracious or kind enough to marry me in 1944, the month of the Normandie landings, at the Little Church Around the Corner. We kept home base in Greenwich Village until the war was over, and have lived in Great Neck, N.Y., and Roslyn Heights, N.Y., ever since. We were joined on the way by a son and then a daughter, now 15 and 13. It's hard to miss the boy . . . he's several inches taller than I, namely 6'2.5" plus and perhaps still trying. I suppose the question always comes up about M.I.T. in such a case, and it certainly looks like he might be a candidate . . . although in the 10th grade, he's a reverse commuter to Manhattan where he attends lecture-seminars at Columbia U. in calculus, vectors, and now other math whose names are too esoteric for me even to remember here. This was after he cracked his leg in school football. The Columbia people selected 200 kids from 2400 candidates in the New York area schools, about 5 from each school. But his real claim to fame among his contemporaries is his discovery of "Lindsay's Disease" in mealworms for an 8th grade Ford science prize in Nassau (seems no one ever looked these

fishfeed over closely) (!) To himself, his best achievement was Mr. Moses giving him a solid 50 bucks for a ninth at the Worlds Fair science contest! Please excuse my running off up there. Thought for a while I was writing the admissions office M.I.T., which looks like a problem coming along too fast, although Ted's casting sheepees at Rice, the "space-age school." But I must say one more, he's doing something now in thin-layer chromatography (??) . . . and I will have to brush up at the M.I.T. Center to understand even half the new language.

"The ladies in the family have been active in the usual non-technical ways. Dorothy established the scholarship fund at the district high when it opened 10 years ago, and graduates have gone everywhere since, including a couple now at M.I.T. She also runs what may be the only Girl Scout Troop for retarded girls. I have been an independent marine or shipping consultant since 1961, under contract to Reynolds Metals Company Research and Development Division to assist and advise on marketing an all-aluminum ocean ship. I take pleasure in telling anyone who will listen that this world's first aluminum cargo ship (to carry 40 trailers Miami-Puerto Rico) is now under construction for friends of mine as per attached clipping. Prior to that I sold the first two aluminum barges for the Mississippi River, both for bulk liquid chemicals. Dave Wright, again XIII-C, took one. My other alma mater, Allied Chemical, has used both regularly. Although only a small group among tens of thousands of vessels in the world, this ship and two barges are unique and represent my small claim to fame in an old industry.

"I haven't written the Class Secretary, I believe, since school. Perhaps divided over 20 years or so it won't look so windy! . . . With best personal regards."

And here's a letter received last week from **Hans J. Haac**, whose home address is 6 Frankfurt/M, Frauenlobstr. 74, West Germany: "The Class of '43 now has another foreign representative. The story is now a little dated, but the first impression of new surroundings do seem the most interesting. In the meantime, we have found 'permanent' quarters which are most satisfactory to say the least. Work for DuPont and see the world! My transfer to Adox Fotowerke, a subsidiary, was sure sudden. Selling the house in Wilmington and the preparations required to move the tribe kept us busy as I was still working at the office but all went as well as can be expected in spite of the usual snafus. I am manager of Data Processing at Adox and chiefly concerned with the conversion from conventional data processing equipment of all types to computer processing (IBM 360/30). In addition, to the sight seeing mentioned on the reverse side, we have taken trips here and there including Heidelberg, picking grapes on the Rhine, Rothenburg, Munich and other interesting sites not too far away. Longer trips will be reserved for vacation time.

"Is there any M.I.T. contingent in Germany? Haven't run into anybody so far, but am sure there must be a few beavers

around with half the USA in Frankfurt." Hans sent along a mimeographed two page letter, which he is sending to friends in the States, parts of which I pass along to you: "To thee statesiders:—Looking out the window, we are still wondering whether we see the Worlds Fair or whether we are really here. Frankfurt itself is an international city, almost like a suburb of America, Italy, France or what have you. After a 30 second lesson shifting gears, we are maneuvering through the wildest traffic patterns and amid the wildest "hurry-up and wait" drivers we have ever seen. Here we go—along the Main bank to the Romer, a trio of Gothic buildings reminding us of the days when German kings were crowned in Frankfurt—to the Kaiserdom where the kings were crowned—past Goethe's birth place—past the zoo—past old buildings, new buildings and towers which were part of the fortification—detoured by subway construction past the IG Farben complex still used as US Army HQ—and on and on. Trips to the suburbs included a walk through the Bad Homburg Kurpark, climbing the Koenigsteinburg and dinner at Koenigstein's Hotel Sonnenhof, the Rothschilds' former residence. The office is a portion of the intown Rothchild estate, club house, garden house, stable, etc. A statue of deGuerre (inventor of photography) and a bust of Dr. Schleussner (the former owner) glared at me as I walked into the office. Memories of the 50's returned when I heard—When is IBM going to get that machine running—It can't be the control panel—Why don't we have empty panels, etc. As we drink that good old German beer, we toast our friends in the USA. Aufwiedersehen you all for now."

Warren L. Knauer has been promoted to assistant division manager and director of operations for the Automotive Products Division of Motorola, Inc. in Chicago. He has been with Motorola since 1957 as division controller. Prior to that, he was engineering assistant to the Vice-president of the Diamond Match Company, plant engineer for the National Gypsum Company, and quality control manager for Victor Adding Machine Company.

Gwynn Robinson, who has been an executive of Northrop International at the company's headquarters in Beverly Hills, Calif., was appointed Vice-president and manager of European Operations with headquarters in Paris. He is in charge of Northrop's Paris office and of all Northrop International operations in Europe, North Africa and the Middle East, and reports to General P. W. Timberlake, Corporate Vice-president, Northrop International. He assumed his new post in Paris September 1, 1965. His address is 32 Avenue Foch, Paris 16, France.

We note from the change of address notices that **Warren J. Fuchs** returned to Roslyn Heights, N.Y., from Haifa, Israel; **Carleton Bryant** was promoted from Commander to Captain in the Navy; and **Robert Friedlander** moved from Poughkeepsie, N.Y., to Bethesda, Md.—**Richard M. Feingold**, Secretary, Ritter & Beriman, 266 Pearl Street, Hartford, Conn. 06103.

'44

Last month I said that I would attempt to get stories from John Hull, Ivyland, Pa., and Paul Heilman, Westport, Conn., on their trips of last fall to Europe and South America, respectively. Both have responded promptly and fully, so my task this month is quite easy. Before proceeding to the trip reports let's cover the shorter items received via the clipping service and the Alumni Association.

Dr. Richard B. Maffei, Peaches Head, Marblehead, Mass., has an article entitled "Modern Methods for Local Delivery Route Design" in the Journal of Marketing for July, 1965. In the article Dr. Maffei relates a case study of a large milk company with hundreds of trucks and thousands of customers. He tells how the study began with a mapping routine and how it evolved to the use of a computer programmed to seek out near-optimal solutions to the problems of scheduling and routing deliveries. The biographical note with the article states that Dr. Maffei received his Ph.D. from the University of Pennsylvania, and that he has extensive teaching experience, a portion of which was at M.I.T.'s School of Management, where he was a lecturer and research associate. The editor's note states that much of the work described in the article was accomplished when Dr. Maffei was senior partner and principal with the Harvey N. Shyon Company, now merged with Barrington and Company and that Dr. Maffei now devotes full time to independent industrial consulting. . . . From McGraw Hill, Inc., we have a release and photograph showing **Carroll Boyce**, Alewives Road, Norwalk, Conn., editor of Fleet Owner magazine, receiving the Golden Knight Award of the Association of State and Provincial Safety Coordinations for his magazine's contribution to highway and traffic safety. The release states that the ASPSC is made up of the special appointees of the governors of the 50 states and 10 provinces of Canada. It is only the sixth award presented by the association and first time a magazine was honored. The award was made in Chicago by the Illinois representative.

Here are the trip reports. First, **John Hull**: "I can now report that my trip to Europe in September was a smashing success. Unfortunately, I could not persuade Betty to join me as she had to get the kids ready to go back to school. The basic reason for the trip was an International Electronic Show in Basel, Switzerland, where we exhibited some of the machinery which we manufacture for the direct encapsulation of electronic components by transfer molding. This is a technique which our company developed a few years ago, and which has contributed much to our growth. We had a booth in the U.S. Pavilion, and received grand cooperation from the U.S. Department of Commerce, which is encouraging exporting of American manufactured goods. Our booth proved to be the most active in the 30 or 40 exhibits in the U.S. Pavilion, and we sold equipment of about \$50,000 worth before leaving Europe. We also laid the

ground work for several hundred thousand dollars worth of additional business which we would expect to close in the next few months. (Some of it has already come in.) Following the show in Basel, I traveled to Munich, Berlin, Cologne, and Amsterdam plus several points in England. Such trips proved to be extremely busy, with almost no time for sightseeing. (We did manage to get on top of the Jungfrau, but it was snowing so hard we couldn't do any skiing.)

"Europe is booming—and they are not far behind the U.S. in production technology for electronic components and systems. I was particularly impressed with the bright neon lights and attractive show windows in West Berlin—you are conscious of East Berlin only when you actually see the barbed wire and the block or two on either side of the barbed wire. Many of the buildings that close to the wire are untenanted, and, while you see no rubble from bombings, you also find no reconstruction immediately adjacent to the line. It is hard to compare Europe 15 years ago with Europe today, because we were working with United Nations 15 years ago, and were not so completely aware of specific economics. We could do a lot of sightseeing 15 years ago, but had to keep our nose to the grindstone on this trip. But if you have any thoughts of doing business in Europe, by all means do so—it is not difficult, and the Europeans are much more receptive to American products and services than we Americans are for European goods and services. Speaking French and German helps, but you can still do a lot without any other languages.

"Incidentally, I'll be going back again in January where we have an exhibit at the U.S. Trade Center in Frankfurt, Germany."

Thank you, John. And now **Paul Heilman**: "Taking the hint from Paul Robinson, here are some quick observations on my Chilean trip. I was there one solid month, two weeks of which were very much involved in putting together an exhibition of a prototype automobile that has twice the normal amount of copper and copper alloys in its makeup. During the other two weeks I had the good luck to visit the Anaconda mine known as Chuquicamata, which is the largest open pit copper mine in the world, as well as the Braden Copper operation known as El Teniente. It took two days to tour each one of these operations, and the tremendous investment in capital equipment and feats of engineering is most impressive. Chuqui is so vast that I took a 35mm slide shot of the big pit, and when I got home, my son counted six complete railroad ore trains in the picture at various levels of the mine. Besides the mining operation, both companies refine and smelt the ore, and account for about 60% of the free world copper supply.

"I found the Chileans most gracious. They are known as the Englishmen of South America. They have a very interesting country when you consider that it is about as long as our border with Canada, but at no place is it more than 100 miles wide. Shipping in such a country is most difficult, so they have to rely a good

deal on shipping things from one spot to another by boat. Chile is noted for earthquakes, and they had had a very violent one last spring. On a stretch of road from Santiago to the shore the earthquake damaged 50% of the bridges by moving them 2 to 10 feet. The whole economy had to repair roads before it could get back into operation. This taxed an already overburdened road building department of public works and delayed many needed roads. I fortunately didn't feel any earthquakes while I was there, although there were three reported nearby Santiago.

"As for our success at the Fair in exhibiting the car, the Chileans took the whole thing to their heart, as it displayed their national product. I was interviewed on television, and the President gave the car an official visit during his tour of the Fair on opening day. We had about one million visitors see the car, and it was considered the hit of the Fair. The Russians shipped in 160 tons of their equipment, and sent in two complete sets of personnel to staff their exhibit. We bested them with our showing, and it was interesting to see their 'technicians' come over and see the American Prototype Exhibition car which they had heard about. Their answers to our questions on copper in Russia showed they hadn't been checked out.

"I found that my Spanish had a slightly different accent than the Chilean Spanish, but by the end of the month I had picked up a good deal of their slang and was getting along quite well. As you can see, I thoroughly enjoyed my month in Chile." . . . Gracias, Paul, for that report of your trip last October. For the March notes I shall seek out the class Officers not heard from recently. In the meantime, of the 900 members of our class there must be several each month travelling to or through Washington, D.C. My telephone numbers are 202-695-0531 (office in the Pentagon) and 703-451-8580 (home). Make a note of them now for your wallet. I am standing by for your calls, postcards, and letters.—**Paul M. Robinson, Jr., Secretary**, 7710 Jansen Drive, Springfield, Va. 22150.

'45

Our 20th Reunion Banquet at Wychmere Harbor Club on Saturday, June 12, was not a formal affair! In fact, the program was most informal. If the truth were to be known, **Dave Trageser** and I had more fun choosing victims and appropriate awards than did the participants!

Outgoing President Dave officially welcomed those in attendance (and no one failed to make dinner this year) and paid particular thanks to Reunion Chairman **Bob Maglathlin** and his Committee. I followed by reading telegrams or making ad lib comments as to the regrets received from **Curly Bickford**, **Art Schwartz '47**, **Jumper Gammon**, **J. J. Strnad**, **Bill Humphries**, **Ray Pelley**, **Tom Markey**, **Spence Standish**, **Andy Marocchi**, **Tom Stephen-**

son and **Emmett Day**. You will all enjoy the following wire from **George Bickford**: Sorry cannot be present to receive award for least change since '45. Still bald, still 150 pounds, still broke—latter accounts for absence!

Dave and I then presented in a haphazard fashion awards, prizes or favors to the following: A Sugar Daddy to **Nick Mumford** for writing **Pinky Copp** 92 letters in 89 days (this award should have been made in 1944); a wagon to **Sherry Ing** for traveling the longest distance—Hawaii; Metrocal for **Harry Eisenhardt** to help him with his weight problem; caps and a cap pistol to **Vince Butler**; Ladies Best Friends awards to **Jake Freiburger** and **Frank Donahue**; suntan lotion to **Norma Hetrick** who was red as a beet; a toy car to **Betsy Hewson** as the best female golfer and most neglected wife; **Blanche Kircher** received the "Keeping Up with the Quinns" prize (both families have seven children); a yoyo to **Al Oxenham** as our most active man; fuses to **Bill Meade** and **Warren Miller** our only bachelors, a lobster to **Bob Welch** our best trout fisherman, a plastic club to **George McKewen**, our best (?) golfer and a plastic ball to his able caddy, **Al Werner**.

Following dinner we adjourned to the public area to enjoy an evening of dancing and excellent bar service. **Pete Hickey** called **Tom Stephenson** (collect?) in Indiana and at least 15 of us had something to say; it was a lengthy phone call! Massachusetts Blue Laws caused the transfer of the evening's activities to the front cottage where the **Jerry Pattersons** and **Chris Bolands** held Open House until the wee hours of the morning.

Fickle Cape Cod weather was upon us Sunday with cold and fog but no rain; it did, however, dampen outside activities. **Sours** and **Bloody Marys** were the call of the hour! At this stage we should report our only casualty—**Bill Shuman's** new Chevrolet! Fortunately, one of the Cape's enterprising mechanics was able to weld a cam on an automatic transmission gear that had failed after 500 miles of use. Brunch was followed by luncheon which in turn lead to departure—some for **Cambridge** and **Alumni Day**, others for home.

Our 20th Reunion was by far our most successful. Why? That, classmates is a most difficult question. However, there follows a possible clue. At the close of the reunion I received several requests for a list containing the names—and especially the occupation—of those in attendance. It would seem that conversations regarding family, activities, and interests never really centered on business activities which are generally foremost in the minds of us all.

About 15 of us—all hearty souls—closed out our Reunion weekend by attending **Alumni Day** activities at the Institute on Monday, June 14, 1965. **Frankie** and I had the good fortune to have the **Hetricks**, **Busbys** and **Mumfords** with us (not all together!) following the reunion; hence we didn't return to normalcy until the end of June!

All of us in attendance at the 20th hope that this brief review of our activities will cause you to join us next time.

Start making your plans now!—**C. H. Springer**, Secretary, Firemen's Mutual Insurance Company, 420 Lexington Avenue, New York, N.Y. 10017

'46

By the time you read this the reunion committee's notices should already have reached you, or they will be coming soon. An added attraction this year which we hope many will enjoy will be a return to the M.I.T. campus after the weekend on the Cape. The Alumni Association is actively encouraging us to participate in Alumni Day activities on Monday, June 13th, 1966, following our 20th reunion weekend at the Provincetown Inn, Friday evening June 10th to Sunday June 12th. For all five year reunion classes the Alumni Association is planning a Sunday evening program, free dormitory rooms for alumni and wives for Sunday and Monday night, free on-campus breakfast Monday and Tuesday, and, of course, the regular Alumni Day program which will include lecture demonstrations about current events and trends at M.I.T., participation in computer programming, and some very popular freshmen seminars will be demonstrated. It would seem well worth the additional day for us all to follow up our reunion weekend at Provincetown with a day on campus. We could see for ourselves the recent changes at Tech and gain a concept of its role in the scientific and engineering developments of today.

Ken Hauser writes to report that he now lives at 611 S. Jordan Ave., Bloomington, Ind., 47403. He is at Indiana University, on the non-teaching faculty as a programmer for their Research Computer Center. They have a CDC 3600 computer. The Hausers find Bloomington a wonderful town in which to live. They have one boy attending the U and hope to send their other two there also. Ken hopes to make it to the reunion. . . . We also received a nice letter from **Bill Schield**. "The last month or so has been like old home week. On a trip East in October, in and around New York, Charlotte and I had nice visits with **Marilyn** and **Bob Spoerl**, **Betty** and **Ray Brown**, **Rosanne** and **Jim Goldstein** from our class. From neighboring classes we visited with **Barbara** and **Joel Feldstein** and on a quick trip to Boston saw **George Berman**. Last week I made a quick trip to Cleveland where I spent a couple of hours on election night with **Jean** and **Herb Hansell**. Herb continues his politicking and I am happy to report that he was elected to the school board of Shaker Heights. Incidentally, one of the purposes of the New York trip was to be present at the listing services of the New York Stock Exchange for **Johnson Service** and, of course, **Ted Doyle** was substantially responsible for handling the listing work." . . . **Ken Davis**, Treasurer of I.B.M., discussed "The Determination of Corporate Financial Objectives—Their Administration and Control through Data Processing" (by IBM equipment no

doubt) at the regular monthly meeting of the Boston Chapter of the Financial Executives Institute last November.

We have a few new addresses to report. **Robert Goodstein**, 4247 87th Ave. S.E., Mercer Island, Washington 98040; **Roland H. Dewhurst**, 43 County Road, Andover, Mass. 01810; **Clarence Ford**, U.S. Steel Corporation, 525 William Penn Place, Pittsburgh, Pa. 15219; **Peter S. Wright**, Evans Road, Gwynedd, Pa. 19436; **Alan R. Gruber**, 1884 Midlothian Dr., Altadena, Calif. 91001; **Dr. Felix E. Browder**, 7 Highland Place, Yonkers, N.Y. 10705; **Richard G. Rauch**, Western Electric Company, P.O. Box 900, Eng. Research Center, Princeton, N.J. 08540; **George A. Ley, Jr.**, RD #3, Wexford, Pa. 15090; **Alexander J. Hoffmeister**, 40 Meadow View Road, Westport, Conn. 06802; **Ray H. Zarnier**, 524 So. Yale, Arlington Heights, Ill., 60005; **John N. Aitken 3rd**, 8210 Ardmore Ave., Philadelphia, Pa. 19118; **Dr. Harvey E. Campbell**, 25525 Graceland Circle, Dearborn Heights, Mich. 48125; **Roy L. Klein**, 12645 Farndon Ave., China, Calif. 91710; **John D. Voneiff**, 5513 Charlcote Rd., Bethesda, Md. 20014; **Jonathan Ingersoll**, 1101 Embarcadero Rd., Palo Alto, Calif. 94303; **Dr. John W. Delaplaine**, 6402 West Halbert Rd., Bethesda, Md. 20014; **Marshall A. Ricker**, 2178 West Catalpa, Anaheim, Calif. 92801; **William L. Phelan**, 8401 Manchester Rd., Silver Spring, Md. 20901; **Robert D. Zucker**, Route #2, Box 41, Carmel, Calif. 09921; **Gunther S. Fonken**, 11069 Hawthorne Dr., Galesburg, Mich. 49053; **Julien Green**, 7 Renfrew Ave., Trenton, N.J. 08618; **Lt. Comdr. Douglas L. Crinklaw**, 4504 Curtiss Drive, Virginia Beach, Va., 23455; and **George E. Burke**, 53 Chaumont Dr., Williamsville, N.Y. 14221. If there are any more address changes there is one fellow who doesn't know about them. He is **John A. Maynard**, Secretary, 25 Pheasant Lane, North Oaks, St. Paul, Minn. 55110.

'47

Martin D. Landau of Allentown, Pa., has joined the faculty of Lafayette College as an instructor in mathematics. He was previously an assistant professor of mathematics at Glassboro State College. . . . **James Prigoff** has been elected Vice-president—marketing of Rosenau Brothers, Inc. Jim was formerly sales manager of Flagg Utica Corporation and manager of the Vanta Company, divisions of Genesco Inc. Earlier, he was president of the McKem Vanta division of Shawmut, Inc. He is currently National Squash Tennis Champion. According to a recent letter, his family has the camping bug and vacationed in the Yucatan last winter. This year they expect to visit the National Park on St. John in the Virgin Islands with their four children and about 30 friends with their families. His home is at 24 Cameron Place, New Rochelle, N.Y. . . . **Dr. Jerome B. Cox, Jr.**, Director of the Biomedical Computer Laboratory, Washington University School of Medi-

cine, has been appointed a member of the National Advisory Research Resources Committee of the Division of Research Facilities and Resources, National Institute of Health.

Virgil Pettigrew has been promoted to assistant corporate controller at Ling-Temco-Vought, Inc. He joined Temco in 1951 and progressed through a variety of assignments within the organization. . . . **Joel Feldstein** has been appointed Vice-president and manager of Ruxford Laboratories, Inc. . . . **John Hunter** has been appointed general manager of the Universal Hydraulic Division, Ohio Brass Company. He was previously associated with Altec, Inc., as director of operations. . . . **Dr. John G. Truxal**, Dean of Engineering of the Polytechnic Institute of Brooklyn, has assumed the office of president of the Instrument Society of America. . . . **Dr. Paul Bock**, director of hydrology and water resources for the Travelers Research Center, has been appointed to the National Committee for the International Hydrological Decade. . . . **Robert D. Carpenter** has become an associate professor in the College of Architecture and Design at the University of Michigan. . . . **Robert C. Mack** has been appointed chief development engineer by Kaman Aircraft Corporation. Bob has been with Kaman since 1952 engaged in automatic flight control development programs. . . . **Dr. Ralph G. Selfridge** is the new director of the University of Florida Computing Center. He and his wife, Iris, live at 4117 NW 36th Terrace, Gainesville, Fla.

Fred Woods, associate director of the engineering department of the Union Carbide Technical Center, has been elevated to Fellow by the Instrument Society of America. . . . Rear Admiral **Robert M. McNitt** is presently Deputy Chief of Staff on the NATO Staff, Allied Forces Mediterranean on Malta. He was previously directing programs at the U.S. Naval Academy. . . . I'm always interested in receiving information from class members who would like to have some news disseminated in this column. Send information to **Martin Phillips**, Secretary, 41 Avalon Rd., Waban, Mass.

'48

Dr. Dean S. Ammer of Northeastern University and 82 Bay State Road attended a national conference of the Association of University Bureaus of Business and Economic Research from October 31 to November 3, 1965, at San Diego, Calif., State University. Dr. Ammer, who is director of the Bureau of Business and Economic Research at Northeastern is a member of the national organization's by-laws committee. . . . **Richard W. Asmus** has joined Mooney Chemicals, Inc., Cleveland, producers of driers for the printing ink and coating industries. He will head the company's new products and process department, with headquarters at the organization's Franklin, Pa., facilities. He previously was with Standard Oil Company (Ohio) for 16

years, working in various capacities, including senior market analyst, senior technical specialist and senior engineer, process development. He holds three U.S. patents in chemical areas. . . . **R. Clark DuBois** has been appointed by Pitney-Bowes, Inc., Stamford, Conn., as a technical assistant to the director of development and design. His home is at 332 Wakeman Road, Fairfield, Conn. . . . **Lynwood O. Eikrem**, recently director of marketing for the David W. Mann Company, a Division of the Geophysics Corporation of America, has been appointed Vice-president of Marketing by Applied Research Laboratories, Inc., Glendale, Calif., a subsidiary of Bausch & Lomb Incorporated. ARL produces a complete line of spectrochemical analytical equipment and maintains sales offices throughout the United States and subsidiaries in foreign countries. Mr. Eikrem will move his wife and four children to the Los Angeles area at the close of the school year.

The Board of Directors of the Massachusetts Bay Transportation Authority has approved the appointment of **Donald M. Graham** to the newly-created position of Manager of Facilities Planning. Mr. Graham is moving over from the Eastern Massachusetts Regional Planning Project where he has served as Project Director since October 1962. Mr. Graham, who came to Boston in 1957 as Planning Administrator of the City Planning Board will direct a staff of about six professional planners engaged in the physical aspects of the Authority's new extensions, such as the South Shore, and other activities related to facilities of the Authority. Mr. Graham is a resident of Lexington. . . . In a November issue of Investor's Reader, Miss Universe, Aspara Hongsakula of Thailand, is pictured beside a digital plotter made by California Computer Products Incorporated of Anaheim, California, of which firm **Lester L. Kilpatrick** is president. The plotter had patterned the Catalina bathing suit she was shown wearing exactly to her 35-22-35 figure. The wonders of mathematics! Mr. Kilpatrick was quoted: "Basically we build equipment for taking computer output data and drawing a pictorial view of it. About a year ago we demonstrated such a plotting device drawing a girl in a bathing suit. That was not a very practical application but as a result Catalina called and asked us if our machine could draw just the suit." Plotters can turn computer output into mechanical drawings, contour and weather maps or performance curves. Mr. Kilpatrick was formerly with North American Aviation's Autonetics division.

In an early November release from the Council for Reorganization of Washington State Government we read that the talents of **Warren King's** consultant firm, Warren King & Associates, Chicago, as well as those of 90 executives from the business and industrial community, were utilized in preparing recommendations to save the taxpayers of the state more than \$70 million, improve efficiency, and provide better service to the citizens. The report was given to Governor Dan Evans on November 3 by the council which was established by executive order of the

Governor on April 14, 1965. In all cases, the recommendations concentrate on improving the effectiveness of state operations without curtailing required services. I quote from a letter from Warren: "As consultants, we feel the results of this five-month project are most gratifying. The final report contains over 670 recommendations for improving the operations of 37 State departments, boards, and commissions in Washington. Implementing these recommendations could realize \$60 million annually in savings or increased revenues. In addition, \$10 million in non-recurring savings are also documented." Dr. **Robert G. Loewy** has been named as Chief Scientist of the United States Air Force. The appointment became effective September 20 and will be for one year. He will be responsible for providing technical and scientific advice to the Chief of Staff of the Air Force on plans, programs and requirements. Prior to his appointment as Air Force Chief Scientist, he had been an Associate Professor of Mechanical and Aerospace Sciences at the University of Rochester. Dr. Loewy is married to the former Lila Myrna Spinner of Brooklyn. They have three children: David, 10; Esther, 7; and Joanne, 4.

Dr. **Alan Simmons** of 9 Cliff Street, Winchester, has recently been appointed general manager of TRG-Boston, a subsidiary of Control Data Corporation. In his new position he will be in charge of TRG-Boston's entire operation. This facility has become one of the leading producers of millimeter test bench equipment and components. Before becoming general manager, Dr. Simmons was director of Research and Development at TRG-Boston, where he was instrumental in the design and fabrication of the 96-foot feed for the world's largest Radio Telescope, the Arecibo, Puerto Rico Ionospheric Observatory. He and his wife and five children reside in Winchester. . . . **James W. Spalding** has been appointed manager of chemical sales, New York District, by United States Steel. After serving in the sales departments of two other companies, Mr. Spalding joined U.S. Steel in 1953 as an assistant analyst in the commercial department in Pittsburgh. The following year he was transferred to Chicago as a salesman in chemical sales and, in 1956, he returned to Pittsburgh and successively became district sales representative and manager of chemical sales. He comes to his present post from the Corporation's Birmingham, Ala., District where he has been manager of chemical sales. He and his wife Marilyn have a son James and a daughter Marilyn. . . . **E. E. Winne** has been named President of the Polymer Chemicals Division of W. R. Grace & Company. He joined W. R. Grace in 1948 immediately after his graduation from Tech. He became Vice-president in charge of development and a director of Grace Chemical Company (now Nitrogen Products Division) when it was formed in 1953. In 1955 he was named Vice-president of Grace Research and Development Company. In March, 1956, he became Vice-president of the newly-formed Polymer Chemicals Division, of which he became

Executive Vice-president in January of 1965. Mr. Winne and his wife, the former Jean Ann Delaney, live in Ridgewood, N. J. They have four children.—**Robert R. Mott**, Secretary, Kent School, Kent, Conn. 06757; **John T. Reid**, Assistant Secretary, Apt. 22C Baltusrol Gardens, 22 West Bryant Ave., Springfield, N. J. 07081; **Richard V. Baum**, Assistant Secretary, 1718 E. Rancho Drive, Phoenix, Arizona.

'51

James Ballou has his own architectural practice in Salem, Mass., where he, his wife, and their five daughters are living in one of the area's more historical homes, the McIntyre House, built in 1805. Jim caught the only large striper at the tenth reunion and can't wait for the 15th in June to catch another striper off Chatham Bars. . . . **Amar Bose** is an associate professor of electrical engineering at the Institute; with Professor Stevens he has published the basic book in introductory circuit theory. Amar and his wife, Prema, whom he met in India while he was on a Fulbright, have one son, Vanu. They all recently returned to India to visit Prema's family. . . . **Donald Brown**, was recently promoted to Project Director of the architectural and construction section of Reynolds Metals' product development division in Richmond, Va. One of Don's recent projects was the design of a prototype aluminum self-service postoffice. . . . **Edward Candidus** is now with Lion Research Corporation in Cambridge, Mass., as senior physicist. Ed and his wife, Shelly, live in Boston. Ed has informed me that **Fred Vanderschmidt** is vice-president of Lion Research. . . . Every so often I receive a large number of cards from classmates and become lulled into thinking that my plea for news has, like Garcia, gotten through; then I find that the card lists simply a change of address. Sometimes I'm not even sure that it is a change; some friendly ones even add: "Hi, how are you?" I'll list a few of these teasers and hope that maybe some of you who have heard from or about these people will drop me a line so that I can pass the news on to the rest of the class. So it is with: **Carl J. Cooper**, course XV, Columbus, Ohio; **Donald K. Crockett**, II, Dallas, Texas; **Norman M. Edelson**, II, Raleigh, N.C.; **William H. Fincke**, II, Huntington, N.Y.; **Adolph C. Hendrickson**, VI-A, Silver Spring, Md.; **Robert Nock**, II (seem to be a lot from course II), Gardena, Calif.; Dr. **James A. Pitcock**, X, Memphis, Tenn.; **David W. Rego**, XIII, Marlton, N.J.; **Robert A. Walter**, XV, Pepper Pike, Ohio (with an address like that there must be something of interest to the class); **Robert F. White**, II, Westerly, R.I. (are you still supervisor in mechanical design at Electric Boat, Bob?); and **Walter H. Zengerle**, Jr., XIV, Berkley Heights, N.J.

Charles W. Ellis, III, became the Director of Preliminary Design at Boeing-Vertol, Ridley Park, Pa., this past August after 13 years with Kaman Aircraft. In June

he was appointed Technical Director (National) of the American Helicopter Society. Chuck and Madaleen have three children ages 14, 12, and 9. . . . **Ralph Evans** has been transferred to New London, Conn., by RCA. Ralph's new project is to do a design review on sonar systems at the Underwater Sound Lab in New London—and Ralph is still single. . . . **William Farrell**, another architect (this seems to be their month), is a partner in the firm of Ranger Farrell and Associates, Consultants, and is also an assistant professor of architecture at Cooper Union in New York City. Bill and Helena have two daughters: Debra, 15, and Susan, 12. . . . **Henry Hahn** is now with Melpar, Inc., in Alexandria, Va., as a research leader for metallurgy and ceramics. Prior to this, Henry was with Curtis Wright. After his S.B. at Tech, Henry picked up a Master's degree at R.P.I. . . . In a previous issue I mentioned that **Charles Hieken** was practicing patent law as a partner in the Boston firm of Wolf, Greenfield & Hieken, but I neglected to tell you that his wife, Donna, is first flutist for the Boston Civic Symphony Orchestra. She has played at various M.I.T. functions and accompanied Roberta Peters at the Mayor's Charity Concert. The Hieken's have two children: Tina Jane, three and one-half, and Seth Paul (under a year), born only two weeks after Donna performed with Miss Peters. Chuck has been active in local alumni affairs, is a member of the Alumni Council, and was the president of the M.I.T. Club of Boston. . . . **Gerry** and **Charlene Ikelheimer** have joined that interesting group of people referred to as parents. Douglas Mark weighed in at six pounds early in October, but that is only half of the story. Charlene and Gerry (yes, both), are proud to list themselves as fanatics for natural childbirth. Gerry assisted at the delivery (Gerry and Henry Fonda, for those of you who have seen "Generation"), while the mother " . . . chatted amicably with the attending Doctors." Anyone interested in further developing this topic is herewith instructed to write to Gerry at 1215 5th Ave., N.Y. City; he will forward words of encouragement along with a barrage of literature. Incidental to all of this, Gerry is with Fibre Products Mfg. Co., which manufactures carrying cases; his concern is new products and automatic production machinery. Gerry mentioned that he saw **Roy Blumberg** at the A.I.P. (Physics) convention; Roy is at Oak Ridge, married, and has three daughters.—and everyone is planning to come to Chatham Bars in June. . . . **Henry Jex** is living in Santa Monica, Calif., with wife, Betsy, and their three girls: Barbara, six, Nancy, five, and Suzanne three and one-half. The oldest two are enrolled in Casa Montessori and are extremely enthusiastic about it. Henry, too, feels quite strongly about the Montessori methods and was elected Vice-chairman of the Board of Directors of Montessori Schools, Inc. This group has four schools totalling over 300 students in the three and one-half to nine age group. As Henry says "this is a bear by the tail!" I became so enthusiastic myself that I almost stopped prior to telling

you that Henry is with Systems Technology, Inc., solving some very interesting cybernetics problems such as piloted control of the Saturn V booster rocket.

Cranston R. Rogers recently took the leadership of the Engineer's section of the Massachusetts Bay United Fund. This is a newly organized and expanded outgrowth of the annual United Fund campaign in the Boston area. Cranston is a major in the Army Reserve and is with Charles A. Maguire & Associates professionally. He lives in Hingham, Mass., where he is clerk of the planning board. . . . **George Siefert** has spent the last 10 years in Groton, Conn., with Electric Boat, as I mentioned in a previous issue. In addition to being Assistant Director of the computer center there, George finds time to play a very respectable game of golf, build (and sail) his own sailboat, do a lot of the constructional modifications of his home, and serve as M.I.T. Educational Councilor in the New London area. George and Evelyn delight over Paul, 9, Carl, 5, and Ann, 2. . . . **Murray Sirkis** is now Professor of Electrical Engineering at the University of Illinois where he has been since 1960. Prior to this he was a professor at Rutgers. Murray received his M.S. and Ph.D. degrees from Illinois in 1952 and 1956 respectively. In addition to his professorial duties he is a consultant to ITT Electron Tube Division. . . . And to all of you a very happy New Year. Thanks to Monk for submitting the notes last month while Ellie and I were away.—**Howard L. Levingston**, Secretary-Treasurer, 358 Emerson Road, Lexington, Mass. 02173; **Forest Monkman**, Assistant Secretary-Treasurer, 7500 East 12th St., Kansas City, Mo. 64126.

'52

Well, here we are back again with quite a bit of news, after a lapse of two months, a good bit of which was spent in a most interesting auto trip to the Southwest and Oregon. . . . **David Kaufman** writes that he and Harriet are living in Brookline and that he is now a senior engineer in the digital division of Hyperion Industries Corporation in charge of all circuit development. . . . **Martin Fink** is living in West Hartford and is a Supervisor of the Aerodynamics Group at United Aircraft Corporation Research Laboratories, and has presented papers on dynamic stability in San Diego and in Tennessee. . . . **Ralph C. Stahman** is chief of Automotive Research Unit of Taft Sanitary Engineering Center doing research on automotive air pollution for the U.S. Public Health Service Division of Air Pollution in Cincinnati. . . . **William C. Gibson** has retired from active duty in the USN and is now working as a design engineer in Weapons and Aerospace Division of Aircraft Armaments, Inc. at Cockeysville, Md.

Bruce Bidwell is vice-president of Bidwell Hardware Company, in Hartford. . . . **Stanley Goldberg** started a coated fabrics business under the name of Fabmetrics, Inc., in March 1965, and is active

in the design and manufacture of such items as large tentage, air supported structures, athletic field covers, etc.

Harry A. Golemon is now a senior partner in the firm of Golemon and Rolfe Architects, in Houston, Texas. . . . **Richard B. Gillett** has been promoted to Manager, Packaging Sales, Archer Aluminum Division of R. J. Reynolds Tobacco Company in Winston-Salem, N.C. . . . **Samuel Cullers** is now completing an urban renewal study of Metropolitan Toronto for the Planning Board there. He was formerly project director of the Community Renewal Program in Chicago, and City Planning Advisor to the Ministry of the Interior, Thailand. . . . **Earl W. Snell** is now teaching at the University of Utah in the Department of Management and is still working to complete his Ph.D. from Stanford. . . . **Maj. Charles H. Bickmann** will finish a fellowship in Clinical Cardiology and be assigned as Staff Cardiologist at Wilford Hall, USAF Hospital, San Antonio, Texas.

John G. Meeker has been appointed assistant to the general manager of Fairchild Instrumentation, a division of Fairchild Camera and Instrument Corporation, in Syosset, L.I., N.Y. . . . **Albert Blackburn** has announced the formation of Aero Systems Associates, Cold Spring Harbor, N.Y., offering consulting service in aeronautical systems' analysis and development. . . . **R. William Morton** is now living in Larchmont and is working for the Industrial Products Division of IBM as a market planner.

S. Parker Gay, Jr., is presently employed by the American Smelting and Refining Company in Salt Lake City, Utah, following seven years in Peru with Marcona Mining and as an independent geophysical contractor. . . . **Richard Evans** has joined Mitre Corporation's Technical Staff in Bedford, Mass. . . . And **Dr. Benjamin Agusta** presented a paper at an IEEE Profession Group for Electronic Devices meeting in Washington, D.C., called the "Sixteen-Bit Monolithic Memory Array Chip," which he co-authored with two others at IBM's Systems Development Division in East Fishkill, N.Y. This marks a significant advance in computer technology as an integrated circuit for computer memory units fabricated on tiny chips of silicon, 70-thousands of an inch square. And that classmates is the end of the mail box and so until enough material comes along for the next column, PLEASE WRITE.—**Dana M. Ferguson**, Secretary, Box 233, 242 Great Rd., Acton, Mass.

'54

Having survived concentrated Japanese for one term, your Secretary brings you February greetings as his second term is about to begin. Only a few bits of information, thanks to two nice letters from Dick McKee and George Schwenk. **Russ Barnes** (X) and his wife Marilyn have recently moved from an apartment to a house, though still in Columbus, Ohio. This will give their two daughters more

room to roam. Russ has taken a leave of absence from Battelle Institute to work full time at Ohio State for a Ph.D. in Physics. . . . **Dick McKee** (X), wife Gård and 22 month old daughter Lisa have just moved to 1171 Tassajara Road in Danville, Calif. Dick is a partner in McKee-Pedersen Instruments, a year and one-half old firm whose basic product, so far, is a modular set of instruments for analytical chemistry. Dick says that their market is with labs which need versatile equipment, those who wish to try out instrumentation ideas and colleges.

Dick Morley (VIII) is president of Bedford Associates which works in numerical control and facsimile transmission as consultants and/or in product development. Dick, his wife Shirley, three children, one dog, and around 100 guppies live in Bedford. 'Tis said that they looked forward, with unbounded hopes to this year's ski season. . . . **George Schwenk** (VIII), self-described as one of the dying sub-set of bachelors in our class, is the treasurer of Bedford Associates. George lives in Westford and also does some consulting in military operations research and data processing.

Only a single item on the graduate side. Professor **Frederick Sanders** (XIX) of MIT discussed the Sanders-Larue-Younkin-Howerman precipitation prediction model at a summer meeting in Oklahoma. Use of the model has increased the verification of precipitation forecasts by 30 percent. Next month you should see the results of all the information you sent me from your Christmas cards . . . so if you didn't send it then—do it now for Ground Hogs Day, Valentine's Day, to commemorate Napoleon's return from exile, et cetera.—**Bob Evans**, Secretary, 43 High Street, S. Acton, Mass., 01771.

'55

Very important news from Wilmington—**David Fleetwood Venarde**, the second-born, arrived in October! . . . One of the participants in the recent White House Conference on International Cooperation was **Donald Brennan** of the Hudson Institute. Don was one of 209 members appointed last spring to the National Citizens' Commission on International Cooperation (he was in distinguished company; others appointed were Marian Anderson, Lucius Clay, Margaret Mead, Henry Cabot Lodge, Walter Reuther). . . . Many of our classmates have new positions. **Bertram Newman** was recently elected president of the Clavier Corporation in Queens, custom producers of military and industrial electronic equipment. He and his wife and two children live in Oyster Bay. . . . **Peter Affeld** and his family have left the New York area for Colorado Springs, where Peter is now administrative vice-president of Colorado Oil and Gas Corporation. . . . **John Blake** has been appointed to the staff of Clapp Laboratories of Battelle Memorial Institute in Duxbury, where he will work on the development of a program of marine bio-

logical research. John was formerly director of research at Aquacultural Research Corporation in Dennis as well as research associate in estuarine science of the Academy of Natural Sciences of Philadelphia, having received his doctorate in marine biology from the University of North Carolina in 1961. He and Ginny have five children, two boys and three girls. . . . **Gerry Kliman** received his doctorate this year at M.I.T. and is now assistant professor of electrical engineering at RPI; he and Edith are living in Troy. . . . **Harold Williams** was appointed assistant psychiatrist of McLean Hospital in Belmont in July. He assumes this task in addition to serving as staff psychiatrist at South Shore Mental Health Center in Quincy, consultant at Mass. General, and in private practice. He is assistant in psychiatry at Mass. General, having taught also at Harvard in 1959. With his wife and three children he lives in Boston. . . . **Dick Dangel** writes that he is living in Rockville, Md., near Washington, with wife, son, and beagle pup. He is program manager of Washington Technological Associates of Rockville, handling their BuWeps programs and NASA contracts. . . . Also living in Rockville is **John Welsh** and **Blanche** and their young daughter. John is president of Flow Laboratories, Inc. of Rockville, a company which he founded to supply tissue culture, virus reagents and other similar products. He finds his mechanical engineering background (a doctorate from M.I.T. in 1959) excellent for this medical field. . . . Another Welsh, **Donald Welsh** and his wife and three children now live in Deerfield, Ill. Don is treasurer and assistant to the president of U-Test-M, Inc., a subsidiary of Sylvania which manufactures self-service tube testers. . . . We have a few more questionnaires which we'll save for a future issue.—Co-secretaries: **Mrs. J. H. Venarde (Dell Lanier)**, 16 South Trail, Wilmington, Delaware, 19893; **L. Dennis Shapiro**, Aerospace Research, Inc., 130 Lincoln Street, Boston, Mass., 02135.

'56

Dave Eaves is now in the math department of Simon Fraser University, Burnaby, British Columbia. . . . From the advanced degree portion of our class we find **Alain Enthoven** as Deputy Assistant Director of the Defense Department. . . . **Ralph Gaze** has joined Telcom, Inc., in Arlington, Va., where he will work on communications and data transmission. After leaving Tech, Ralph received his master's degree from George Washington University and has worked for Melpar and Page Communications Engineers. . . . **Henry Imus** is with the Beckman Systems Division in Fullerton, Calif. . . . **Johan Koppernaes** writes that he teaches at the Nova Scotia Technical College and operates an engineering firm which has become a leading designer of fish processing plants in eastern Canada. . . . **George Paulissen** reports that he is spending a year at the Amsterdam Laboratories of Royal Dutch Shell. . . . Captain **Dave**

Quigley is an aerospace medical officer at Brooks Air Force Base, Texas. Last spring he attended the 36th Annual International Aerospace Medical Association meeting in New York (36 years of aerospace medicine? Buck Rogers must have started it). Dave's wife, Eileen, was formerly from Beverly, Mass., and Dave received his M.D. from Tufts. . . . **Mickey Reiss** has become a registered representative for the brokerage firm of Carl P. Sherr and Company in Worcester, Mass. . . . **Harold Stein** reports that his wife gave birth to their fifth child, Gretchen, last May 11. . . . **Vasil Tasi** will wed Mary Lou Cackowski of Stamford, Conn., on February 5. Vasil works for CBS Laboratories in Stamford.

Again I want to remind you of the reunion on June 10-11—contact Bill Grinker, 21 Woodward Road, Framingham, Mass.—**Bruce E. Bredehoff**, Secretary, 16 Millbrook Road, Westwood, Mass. 02090.

'60

Doug Sinclair has been appointed Assistant Professor of Optics at the University of Rochester; he received a Ph.D. from Rochester two years ago and has been in the U.S. Army Engineer Research and Development Laboratories at Fort Belvoir, Va.

Chuck (Charles) Eckert is now assistant professor of Chemical Engineering in the Department of Chemistry and Chemical Engineering at the University of Illinois in Urbana, Ill. Before going to Illinois he was a fellow and teaching assistant at the University of California at Berkeley; he received his Ph.D. from Berkeley in 1964. . . . **Dave Aaker** is a Ph.D. candidate in the Graduate School of Business at Stanford, Calif.; he has moved to Palo Alto from Houston where he was working for Texas Instruments. . . . **Sam Gorovitz** is Assistant Professor of Philosophy at Western Reserve University; his Ph.D. is from Stanford. He has a book out—"Philosophical Analysis—An Introduction to its Language and Techniques," written with R. G. Williams in collaboration with D. Provence and M. Province.—**Linda G. Sprague**, 345 Brookline Street, Cambridge, Mass.

'62

Tom Burns writes that as of January 1 he will have been transferred to his company's German affiliate, Caltex Deutschland GmbH for a two year assignment in petrochemical marketing. He and his wife, Louise, will stop in Belgium on the way to Germany, where Tom has a six-week assignment. Their new address will be: c/o Caltex Deutschland GmbH, AM Hauptbahnhof 6, Frankfurt/Main, Germany. Tom spent two years in New York City before this transfer. He plans to open an office for the Class of '62, so roving class members will now have a place to call in Frankfurt as well as the Sandwich Islands. . . .

Carl Bauer has transferred from the Technical Placement Department in Midland to a new post in the European operations of the Dow Chemical Company. He will live in Rotterdam, working as an international industrial relations assistant on the Industrial Relations staff for Europe.

There has been very little mail coming in lately from '62ers. I know that the following people have news to report, since they have all moved recently: William Anderson, Abe Aronow, Elliott Bayly, Pete Brown, David Cahoon (to Paris), Ed Feinberg, R. Bruce Fisher, Jeremy Goldberg, Dave Harralson, Nathan Hopton, Michael Kaericher, Jim Kesler, Bill Koch, Doug Loescher, Robert Lytle, Warren McCandless (to Sacramento, Calif. with Procter & Gamble Mfg. Co.), Roger Rowe, Ed Schneider, Douglas Steele, and Hal Waller. I expect to hear from everyone on this star-studded list in the next few weeks.

My wife Linda and I and our daughter Pamela will have spent the Christmas holidays on the mainland in the San Francisco Bay area, where we hope to see **John** and **LaVerne Ohlson**, who are expecting their second child in June.—**Jerry Katell**, Secretary, c/o Oceanic Properties, Inc., 401 Kamakee Street, Honolulu, Hawaii, 96803.

'63

Don Dreisbach is now in the Peace Corps in Iran teaching English. . . . **Roy Hamlin** is with the Peace Corps in Ghana teaching math and science in secondary schools. . . . **Elliott Bird** has joined the faculty of the New Haven College after receiving his Master's at the University of Mass. He is teaching mathematics. . . . **Ben Saievetz** is now a contract coordinator at McDonnell Aircraft after getting his MBA at Harvard. . . . **John Addis** is with Tektronix in Portland where he has designed the Type 1A7 Plug-in unit which was released last August. . . . **Mike Bertin** writes that he married Barbara Bunin in June, '64 and they now have a baby girl. He is working on his Ph.D. at Rutgers. He also supplied the following news:

"**Frank Model** was married this July in San Francisco. At present he and his wife Sue are living in Cambridge while Frank is working for his Ph.D. in chemistry at Harvard. . . . **Dick Males** completed his M.S. in civil engineering at M.I.T. in June of 1964 and is now halfway through a two year stint in the Peace Corps. Dick is teaching at the National Engineering University in Lima, Peru. . . . **Jack Solomon** is also married. (June 5, 1965) His wife Fay is teaching at St. John's University in N.Y. and studying at Columbia, while Jack is getting his Ph.D. in chemistry at Columbia. . . . **Larry Beckreck** was just engaged to Miss Julia Knox of Liverpool, England. Larry is still at M.I.T., working for his Ph.D. in course 1.

"**Larry Kraukauer** is also at Tech, working for his Ph.D. in course 6 on an NSF Fellowship. A word of caution to

Marty Schrage—Larry's present roommate. Everyone Larry has ever roomed with is now married; Schrage's days as a bachelor are undoubtedly numbered. Marty works for EG&G in Boston. . . . **Ira Blumenthal** is with Boeing Aircraft in Seattle, Wash. He and his wife Carolyn are living on an island suburb of Seattle. . . . **Marvin Singer** got his MS from Columbia last year and is now working for Gulf Oil in Pittsburgh.

"People in the vicinity of Rutgers and Princeton that I've run into are **Tony Fiory** and **Ed Kanegsberg**, who are at the Rutgers Physics department, **Paul Fishbane**, working in theoretical physics at Princeton, and **Pete Politzer**, who is studying for his Ph.D. at Princeton in the department of aerospace physics at Forrestal Research Labs."

Thank you Mike Bertin for that newsy letter; more of you should follow his example. Send any news to: **Bob Johnson**, 1089 N.E. 91 Terr., Miami, Fla. 33138.

'64

The news this month is relatively sparse, but I'm greatly encouraged by one letter already received as a direct result of a plea in the December issue for more news. Let's have everyone respond.

Dick Adamec was commissioned an Army second lieutenant after graduating from the Officer Candidate School at the Artillery and Missile Center, Fort Sill, Okla. on Nov. 23 of last year. Dick graduated in Course XIV and was a member of Phi Mu Delta fraternity. . . . **Jason Fane** picked up an S.M. in Civil Engineering last February at M.I.T. and is now in his second year at the Harvard Business School. He is editor of the Harbus News, a 16 page weekly, which he has patterned after The Tech. Jason was also editor of the latter paper. . . . **Paul Lubin** is employed as a research chemist at Polaroid in Cambridge and is working on a M.S. in chemistry at Northeastern at night. . . .

Jim Monk has packed up his worldly possessions in Akron, Ohio, and has shipped them to West Germany, where he will take up the position of production foreman at the German plant of Goodyear International beginning January 3. Jim received his diploma as a Goodyear Squadron graduate in November. He and his wife Pat will visit Texas, New York, London, and Berlin before going to the plant at the small town of Fulda. Jim says his apartment there has three extra bedrooms, so guests are welcome if they can find Fulda! His address is: Gummiwerke Fulda GMBH, Postfach 440, 64 Fulda, W. Germany. . . . **Paul Lubin** reports that **Bernie Morris** was married to the former Anne Rafkind, a senior at B.U., on May 30, 1965. He is now studying for his Ph.D. in physics on a teaching fellowship at Brown. . . . I spotted **Ed Shibata** at the new M.I.T. Student Center at a Christmas season open house there. He is pursuing his work on a Ph.D. in physics and said he would send forth news soon. That's it for now. Let me hear from you.—**Ron Gilman**, Secretary, Dane Hall 102, Cambridge, Mass. 02138

Club News



Houston Alumni Hear About Student Activities

The M.I.T. Club of South Texas held its fall meeting on Armistice Day at Memorial Drive Country Club. During the dinner four imported wines were served, and appropriate comments were made by a wine importer's representative.

Our speaker from M.I.T., Associate Director of Student Aid, J. Samuel Jones, was a little apprehensive about following all that wine on the program. His delightfully amusing and informative talk indicated that M.I.T. students are still very busy going about their usual (and some pretty unusual) activities, and have next to no time left over for marching in the streets.—**Edwin A. Reed**, '45, Secretary, 6243 Briar Rose, Houston 27, Texas.

Washington Club's 1st Seminar To Take Place February 26

Plans have been firmly established for the first in a series of technical seminars to be sponsored by the M.I.T. Club of Washington. The program is in response to the increasing awareness of Alumni for the need of continuing education. The initial seminar will be held on Saturday afternoon, February 26, in the main auditorium of the Institute for Defense Analyses Building, 400 Army-Navy Drive, Alexandria, Va. We are fortunate in that the key speaker will be Dr. Charles Townes, M.I.T. Provost and Nobel Laureate for his work on basic principles leading to the development of the Laser. The subject of the seminar will be "Lasers and Their Applications." Maser hardware will be available for demonstration and discussion. We encourage all Alumni in the area to attend and help make our first effort a success.

Dr. Ernst Stuhlinger, Director, Research Projects Laboratory, George C. Marshall Space Flight Center, NASA, Huntsville, spoke at the December 9 dinner meeting. Dr. Stuhlinger's talk touched upon various aspects of post-Apollo missions such as a manned voyage to Mars. The proposed mission, to take place in the 1982-1985 time period, would probably require a four man crew and would make use of equipment such as ion-propulsion and nuclear engines. Dr. Stuhlinger stated that no new technology would be required for the mission since a combination of available hardware and current developmental items could be used.

A dinner meeting was held at the Cosmos Club on January 27. The guest speaker was Mrs. Dorothy MacArthur, Deputy Director of the Peace Corps. On March 17, at the Cosmos Club, our guest will be the honorable Hubert H. Humphrey, Vice President of the United States.—**Dan R. McConnell**, 4134A Suitland Road, Suitland, Md.

Mexico City Fiesta To Open March 10

The eighteenth annual M.I.T. Fiesta will take place in Mexico City on Thursday, March 10, through Saturday the 12th. Planned events include a luncheon at the 16th-century home of Don Federico Tamm on Thursday and a visit to the Pyramids of the Sun and Moon at Teotihuacan on Friday. A Saturday afternoon Charreada, with expert riding and roping by Mexico's finest gentlemen Charros in full costume, followed by a "noche Mexicana" will close the festivities. Dr. and Mrs. Julius A. Stratton and Mr. and Mrs. Donald Severance will attend.

Mexico City alumni suggest the city's bullfights, the Floating Gardens at Xochimilco, the Anthropology Museum in Chapultepec Park, and the Folklore Ballet at the Palace of Fine Arts as attractions for visitors to the Fiesta. For reservations write to Mr. Armando Santacruz B., Fiesta Chairman, M.I.T. Club of Mexico City, Reforma 116-804, Mexico 6, D.F., Mexico.

Los Angeles Annual Meeting Held in January

The annual meeting of the M.I.T. Club of Southern California was held Tuesday, January 18, at the Los Angeles Athletic Club. Officers for the year 1966 were nominated and elected. A special board of governors meeting was held at Laguna Beach on December 4, at the home of George Cunningham, '27. A new office and home address directory of all M.I.T. alumni residing in the area was prepared by Martin Chetron, '56, and distributed by the club in December.—**Philip Schwartz**, '23, 122 San Miguel Rd., Pasadena, Calif.

Sloan Fellows

The Canadian Imperial Bank of Commerce has recently announced the appointment of **Charles M. Laidley**, '65, as regional general manager international at Toronto. Prior to his present appointment, Mr. Laidley was superintendent at the bank's head office in Toronto. . . . Upon returning to the Chrysler Corporation, **William McGagh**, '65, was named treasurer and comptroller of Chrysler Canada Ltd., located in Windsor, Ontario. . . . **James E. Finley**, '60, was recently appointed group vice-president for domestic exploration and production with Continental Oil Company.

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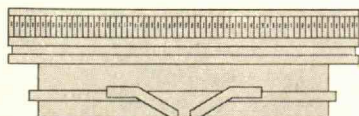
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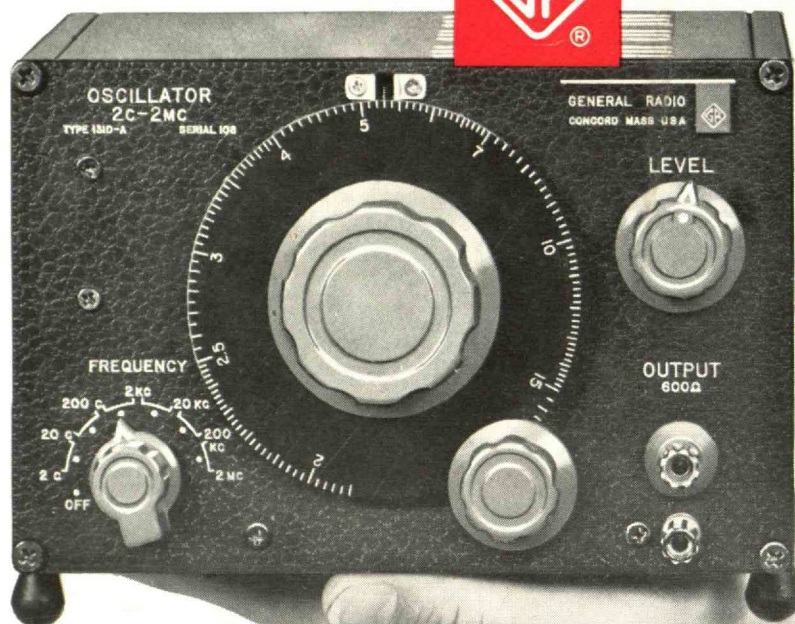
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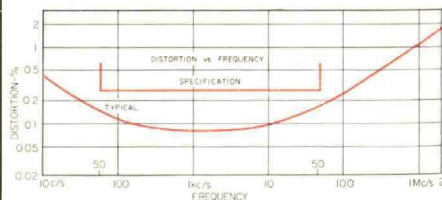
Synchronization: Jack provided for external phase-locking signal. Locking range is about $\pm 3\%$ for 1-V, rms, input reference signal over entire 2-c to 2-Mc range. Locking ranges up to 40% can be used.

Output

Voltage: Over 20 V, open circuit; continuously adjustable attenuator (approximately 50 dB).

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Impedance: 600- Ω



Distortion: As indicated. Hum less than 0.02% independent of attenuator setting.

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